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In the Supreme Court of the United States

OCTOBER TERM, 1978

CECIL D. ANDRUS, SECRETARY OF THE INTERIOR,
PETITIONER

v.

SHELL OIL COMPANY AND D. A. SHALE, INC.

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE TENTH CIRCUIT

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The Solicitor General, on behalf of the Secretary of the Interior, petitions for a writ of certiorari to review the judgment of the United States Court of Appeals for the Tenth Circuit.

OPINIONS BELOW

The opinion of the court of appeals (App. A, *infra,* la-20a) is reported at 591 F.2d 597. The opinion of the district court (App. C, *infra,* 22a-56a) is reported at 426 F. Supp. 894. The opinion of the Interior Board of Land Appeals (App. E, *infra,* 60a-121a) is reported

at 16 I.B.L.A. 112. The opinion of the administrative law judge (App. F, *infra*, 122-204a) is not reported.

JURISDICTION

The judgment of the court of appeals (App. B, *infra*, 21a) was entered on January 25, 1979. On April 16, 1979, Mr. Justice White extended the time for filing a writ of certiorari to May 25, 1979, and on May 16, 1979, he further extended the time for filing to June 4, 1979. The jurisdiction of this Court is invoked under 28 U.S.C. 1254(1).

QUESTION PRESENTED

Whether Congress ratified the administrative decision in *Freeman* v. *Summers*, 52 L.D. 201 (1927), and the subsequent grant of numerous oil shale patents, thereby excepting oil shale claims from the discovery requirement of the general mining laws.

STATUTES INVOLVED

Section 1 of the Act of May 10, 1872, ch. 152, 17 Stat. 91, 30 U.S.C. 22, provides:

> Except as otherwise provided, all valuable mineral deposits in lands belonging to the United States, both surveyed and unsurveyed, shall be free and open to exploration and purchase, and the lands in which they are found to occupation and purchase, by citizens of the United States and those who have declared their intention to become such, under regulations prescribed by law, and according to the local customs or rules of miners in

> the several mining districts, so far as the same are applicable and not inconsistent with the laws of the United States.

The Act of July 9, 1870, ch. 235, 16 Stat. 217, 30 U.S.C. 35, provides in pertinent part:

> Claims, usually called "placers," including all forms of deposit, excepting veins of quartz, or other rock in place, shall be subject to entry and patent, under like circumstances and conditions, and upon similar proceedings, as are provided for vein or lode claims * * *.

Section 37 of the Mineral Leasing Act of 1920, ch. 85, 41 Stat. 451, 30 U.S.C. 193, provides:

> That the deposits of coal, phosphate, sodium, oil, oil shale, and gas, herein referred to, in lands valuable for such minerals, including lands and deposits described in the joint resolution entitled "Joint resolution authorizing the Secretary of the Interior to permit the continuation of coal mining operations on certain lands in Wyoming," approved August 1, 1912 (Thirty-seventh Statutes at Large, page 1346), shall be subject to disposition only in the form and manner provided in this Act, except as to valid claims existent at date of the passage of this Act and thereafter maintained in compliance with the laws under which initiated, which claims may be perfected under such laws, including discovery.

The Act of July 20, 1956, ch. 652, 70 Stat. 592, amending the Act of July 17, 1914, 30 U.S.C. 122, provides:

> *Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the first sentence of section 2 of the Act entitled "An Act to provide for agricultural entry of lands withdrawn, classified, or reported as containing phosphate, nitrate, potash, oil, gas, or asphaltic minerals", approved July 17, 1914 (38 Stat. 509; 30 U.S.C. 122), is hereby amended by striking out "such deposits to be subject to disposal by the United States only as shall be hereafter expressly directed by law" and inserting in lieu thereof, "such deposits to be subject to disposal by the United States only as shall be hereafter expressly directed by law: *Provided, however,* That all mineral deposits heretofore or hereafter reserved to the United States under this Act which are subject, at the time of application for patent, to valid and subsisting rights acquired by discovery and location under the mining laws of the United States made prior to the date of the Mineral Leasing Act of February 25, 1920 (41 Stat. 437), shall hereafter be subject to disposal to the holders of those valid and subsisting rights by patent under the mining laws of the United States in force at the time of such disposal.

STATEMENT

1. To perfect a claim under the general mining law (the Act of May 10, 1872, 17 Stat. 91, 30 U.S.C. 22

et seq.), a claimant must establish that he has discovered a valuable mineral deposit within the limits of each claim. *Cole* v. *Ralph,* 252 U.S. 286, 295 (1920). The test for value is the "prudent man test," *Chrisman* v. *Miller,* 197 U.S. 313, 322 (1905), augmented by the marketability test, *United States* v. *Coleman,* 390 U.S. 599, 602-603 (1968). The combined tests require evidence of a mineral deposit of such character that a person of ordinary prudence would be justified in the further expenditure of time and money with a reasonable expectation that the minerals from the claims could be marketed at a profit. The question here is whether these criteria apply to claims in respect of oil shale, a fine grained laminated sedimentary rock containing kerogen, organic matter that will produce oil upon destructive distillation (App. F, *infra,* 127a).

The issue remains important despite the enactment of the Mineral Leasing Act of 1920, ch. 85, 41 Stat. 437, 30 U.S.C. 181 *et seq.,* which withdrew oil shale and certain other minerals (including coal, oil and gas) from location under the general mining laws and established a new system of development by leasing rather than by the location of placer claims. Section 37 of the 1920 Act provided that "valid claims existent at date of the passage of this Act and thereafter maintained in compliance with the laws under which initiated" could be "perfected under such laws, including discovery." 30 U.S.C. 193. And a large number of oil shale claims remain outstanding.

2. In 1927 the Secretary issued a decision in *Freeman* v. *Summers*, 52 L.D. 201, upholding a placer claim for oil shale in a contest proceeding involving a homestead claim to the same land. The Secretary observed that there had been as yet "no considerable production of oil from shales, due to the fact that abundant quantities of oil have been produced more cheaply from wells * * *." 52 L.D. at 206. But he nevertheless held that oil shale could be located as a valuable mineral, reasoning (*ibid.*):

> [T]here is no possible doubt of its value and of the fact that it constitutes an enormously valuable resource for future use by the American people.
>
> It is not necessary, in order to constitute a valid discovery under the general mining laws sufficient to support an application for patent, that the mineral in its present situation can be immediately disposed of at a profit.

Following this rationale, between 1920 and 1960 the Department of the Interior issued 523 patents for 2,326 oil shale claims (App. E, *infra*, 108a).

3. In 1964 the Secretary initiated two complaints contesting the validity of nine placer oil shale claims in Colorado (App. F, *infra*, 123a).[1] Both complaints alleged first, there had been no discovery of a valuable mineral deposit on the claims prior to February 25, 1920 (the date shale oil was withdrawn from location under the general mining laws); second, if there had

[1] The claims were the Mountain Boys Nos. 1, 6, and 7, Harold Shoup Nos. 1, 2, 3, and 4, and K. C. Schuyler Nos. 2 and 3 (App. F, *infra*, 122a-123a).

been a valid discovery, the discovery was subsequently lost; and third, there was no valuable mineral deposit within the limit of the claims at the time of the contest proceedings (App. F, *infra,* 124a). The complaints requested that the claims be declared null and void (App. F, *infra,* 125a). Because of the identity of the issues and the proximity of the claims, the cases were consolidated (App. F, *infra,* 125a).

The administrative law judge found (App. F, *infra,* 176a, 179a, 184a) that the locators had made a "physical finding" of oil shale within the limits of only six of the nine claims by February 25, 1920. As to the six claims where oil shale had been physically located, the ALJ considered whether they met the traditional discovery test, *i.e.,* whether " 'a person of ordinary prudence would be justified in the further expenditure of his labor and means,' on the contested claims, 'with a reasonable prospect of success, in developing a valuable mine,' and whether the product of the mines could be marketed at a profit" (App. F, *infra,* 138a-139a; citations omitted). After reviewing the uniformly unsuccessful efforts to mine oil shale profitably anywhere in the United States during the half-century since the location of the six claims (App. F, *infra,* 145a-165a), the ALJ observed (App. F, *infra,* 165a) that "[t]he very fact that, in the more than half a century of interest in oil shale claims of the Green River Formation, not one profitable mine has been developed is a compelling reason for concluding that expenditure of money to that end would be imprudent." The ALJ rejected respondents' contention that "money spent or

obligated in the acquisition of oil shale claims" proved that the claims included valuable mineral deposits, reasoning that in order to establish a valuable discovery for purposes of the general mining laws, "[t]he mineralization must be such, not to justify the purchase of the mining claim, for possible future development, but to justify present expenditures with a reasonable prospect of developing a profitable mine" (App. F, *infra,* 166a).

The ALJ nevertheless upheld the claims. He explained (App. F, *infra,* 166a-167a) that "[i]f this were a case of first impression [he] would, for the foregoing reasons, find that both before and after February 25, 1920 oil shale was not a valuable mineral." But he concluded (App. F, *infra,* 167a-170a) that he was bound by *Freeman* v. *Summers,* and the decisions following it, which held "that oil shale is a valuable mineral subject to appropriation under the mining laws." The ALJ acknowledged that the decision in *Freeman* v. *Summers* "was poorly conceived," but he stated he was nevertheless bound by it (App. F, *infra,* 170a).

3. The Interior Board of Land Appeals (IBLA) reversed, overruling *Freeman* v. *Summers* (App. E, *infra,* 60a-121a). The Board adopted the portion of the ALJ's opinion reviewing the history of the unsuccessful attempts to develop foreign and domestic oil shale (App. E, *infra,* 75a), adding the following comments (App. E, *infra,* 105a):

> First, as a historical fact, the commercial production of oil from oil shale has never been competitive with the liquid petroleum industry. Second, the

> hypothetical studies at best confirm that the commercial exploitation of oil shale would not be competitive with the liquid petroleum industry. Third, without exception, every oil shale operation that has been attempted in this country has failed to show profitable production. Fourth, [respondents] have held these claims for half a century without attempting to exploit them.

In sum, the Board found it "unlikely that any oil shale operation could have operated at a profit at the time these claims were located or at any time up to and including the time of these contest proceedings" (*ibid.*). The Board recognized that with a breakthrough in technology or a change in the economic situation the production of oil from shale might in the future become profitable, but it held that "speculation that oil shale may someday be valuable in an economic sense is not evidence of its present value as of 1920 or 1966" (App. E, *infra,* 107a). Accordingly, since the oil shale deposits on these claims could not have been mined and marketed at a profit at the time of location or the date of contest, the Board held those deposits "never have been a valuable mineral deposit within the meaning of the general mining law" (*ibid.*).

The Board acknowledged (App. E, *infra,* 108a) that "[b]etween 1920 and 1960 the Department consistently recognized oil shale as a valuable mineral deposit" on the basis of the analysis of the *Freeman* v. *Summers* decision. In the Board's view (App. E, *infra,* 109a), "[t]he basic substantive error in *Freeman* is its underlying assumption that possible future value for mining

meets the requirement of present value." Though the *Freeman* decision relied upon *Castle* v. *Womble,* 19 L.D. 455, 457 (1894), that case held that "the requirement relating to discovery refers to present facts, and not to the probabilities of the future." The Board found that the *Freeman* decision was "clearly contrary to the mining law," and accordingly that it must be overruled (App. E, *infra,* 112a).

The Board rejected respondents' contention that if *Freeman* v. *Summers* were overruled, the decision must be given only prospective effect (App. E, *infra,* 112a-121a). The Board pointed out (App. E, *infra,* 114a) that "the only rule in effect at the time these claims were located and on February 25, 1920, was the prudent man test of *Castle* v. *Womble, supra,* requiring present marketability," and it concluded (App. E, *infra,* 115a) that "[n]either [respondents] nor their predecessors in interest could have relied on the Department's policy in 1920-1960 in locating the claims herein." It found (App. E, *infra,* 117a) no evidence that respondent D. A. Shale had "invested more than a minimal amount" in its claims, and that respondent Shell Oil Company had purchased its claims after the Secretary initiated the contest proceedings. The Board concluded (App. E, *infra,* 121a) that the continued application of the *Freeman* v. *Summers* decision, which excepted oil shale claims from the requirement of present discovery, would be "contrary to law and in derogation of the Secretary's responsibility as trustee of the public lands for the people of the United States."

4. Respondents sought judicial review of the IBLA's decision in the United States District Court for the District of Colorado (App. C, *infra*, 23a, 26a). The district court granted summary judgment for respondents, holding that the "pre-1920 oil shale claims were discoveries of valuable mineral deposits and are valid claims" (App. C, *infra*, 55a). The court concluded (App. C, *infra*, 38a) that the "Congressional and administrative involvement in the disposal of oil shale lands demonstrates Congressional approval of the *Freeman* rule of discovery," which the courts "should respect and apply * * * in the absence of Congressional action to the contrary." Alternatively, the court held that "[e]ven if the Congressional treatment of the *Freeman* rule is considered merely as an interpretative aid, and not as hardening the *Freeman* rule into an act of law, * * * the Interior Department is estopped from challenging the validity of the pre-1920 oil shale claims involved in this case," since "[p]rudent investors detrimentally relied upon the deliberate actions and statements of high government authorities" (App. C, *infra*, 40a; footnote omitted).

5. The court of appeals affirmed (App. A, *infra*, 1a-20a). The court acknowledged (App. A, *infra*, 3a) that the " 'valuable mineral deposit' standard or requirement was not met as to oil shale claims of the type here considered before 1920 as the standards were applied to the metallic minerals," but it held (App. A, *infra*, 20a) that the *Freeman* v. *Summers* standard had become "an addendum to the mining law which cannot be removed short of Congressional action."

The court noted that in 1930 Congress conducted an investigation of charges of impropriety in connection with the Department of the Interior's policies of issuing patents for oil shale claims and more particularly the decision in *Freeman* v. *Summers* (App. A, *infra,* 9a). The court concluded (App. A, *infra,* 12a) "Congress made an intense investigation into Interior's interpretation of the mining laws as to a very specific and narrow circumstance, and approved it." The court also noted (App. A, *infra,* 13a-14a) that in 1956 Congress had acted on the assumption that oil shale located prior to 1920 were valid claims when it eased one of the restrictions for taking oil shale claims to patent. In sum, the court held (App. A, *infra,* 17a) "[t]he different treatment afforded all oil shale claims as to the valuable mineral deposit element of a location became a part of the general mining laws by reason of its adoption and approval by both Houses of Congress during the intensive investigations of this very question and their affirmative resolution of the issue." Accordingly, the court held that the Department of the Interior has no authority to "change the application of the general mining laws" to these oil shale locations (*ibid.*).

REASONS FOR GRANTING THE PETITION

This decision, if permitted to stand, may require the United States to patent more than 5 million acres of federal land within the Tenth Circuit [2] for $2.50 per

[2] The number of oil shale claims cannot be precisely determined at the present time because claims located prior to February 25, 1920 were filed locally, with no requirement that the federal govern-

acre under the general mining laws,[3] despite the fact that none of the claimants has established the discovery of a valuable mineral deposit. The principal basis for this unprecedented decision is the court's conclusion (App. A, *infra,* 20a) that the investigation of two congressional committees—which resulted in no legislation, nor, indeed, even a committee report—constituted the enactment of a relaxed discovery standard for oil shale as "an addendum to the mining law." The issue presented here is important to the administration of the public lands, and it warrants review by this Court.

1. The general mining laws permit the location and extraction of "valuable mineral deposits in lands belonging to the United States." 30 U.S.C. 22. As this Court explained in *United States* v. *Coleman,* 390 U.S. 599, 602 (1968) (footnote omitted):

> Under the mining laws Congress has made public lands available to people for the purpose of mining valuable mineral deposits and not for other purposes. The obvious intent was to reward and encourage the discovery of minerals that are valuable in an economic sense. Minerals which no pru-

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ment be notified. However, Section 314 of the Federal Land Policy and Management Act of 1976, Pub. L. No. 94–579, 90 Stat. 2769, 43 U.S.C. 1744, now requires that all unpatented claims existing as of October 31, 1976, be recorded with the Department of the Interior by October 31, 1979.

Even assuming that oil shale met the discovery test, some of the claims would be subject to challenge on the ground that the claimant had not substantially satisfied the assessment requirement. See *Hickel* v. *Oil Shale Corp.,* 400 U.S. 48, 57 (1970).

[3] The land on which a valid placer claim is located may be patented by the mining claimant for $2.50 per acre. See 30 U.S.C. 37.

> dent man will extract because there is no demand for them at a price higher than the cost of extraction and transportation are hardly economically valuable. Thus, profitability is an important consideration in applying the prudent-man test * * *.

See *Chrisman* v. *Miller*, 197 U.S. 313, 322 (1905). Both this Court and the Secretary held in a number of early decisions that marketability must be shown as a present fact, not by speculation about value in the future. See, *e.g.*, *Castle* v. *Womble, supra,* 19 L.D. at 457; *John Downs,* 7 L.D. 71, 73 (1888); *Magalia Gold Co.* v. *Ferguson,* 6 L.D. 218, 220 (1887); *Davis's Administrator* v. *Weibbold,* 139 U.S. 507, 522, 523 (1891); cf. *Iron Silver Mining Co.* v. *Mike and Starr Gold and Silver Mining Co.,* 143 U.S. 394, 404-405 (1892); *United States* v. *Iron Silver Mining Co.,* 128 U.S. 673, 683-684 (1888). See also *Roberts* v. *Morton,* 549 F.2d 158, 163 (10th Cir. 1976); *Barrows* v. *Hickel,* 447 F.2d 80, 83 (9th Cir. 1971); *United States* v. *Estate of Alvis F. Denison,* 76 L.D. 233, 239-240 (1969). The present holding is wholly at odds with this salutary rule.

The requirement that the claimant show present marketability is one of the most essential elements of the mining laws. If claims could be sustained solely upon a showing of possible future profitability, it is doubtful that any claim showing any mineralization whatsoever could be ruled invalid, for no matter how "low-grade" the mineral deposit might be, there would always be the possibility that exploitation might some day become profitable when better quality deposits become exhausted or new technology makes exploitation

feasible. Recognition of claims based upon possible future profitability would not serve the purpose of the mining laws, which is to encourage the development of actual mining operations, not to enrich speculators.

2. Although correctly conceding (App. A, *infra,* 3a) that since oil shale could not in 1920, and cannot now, be marketed at a profit, "it must be concluded that the 'valuable mineral deposit' standard or requirement was not met as to oil shale claims of the type here considered before 1920 as the standards were applied to the metallic minerals," the court of appeals upheld the present claims. This was justified on the premise that Congress had been apprised of the decision in *Freeman* v. *Summers* and the Secretary's subsequent grant of numerous oil shale patents, and had acquiesced in and adopted an exception to the discovery requirement.

The court's conclusion that Congress ratified a special exception to the mining laws for oil shale claims is founded principally on the fact that in 1931 both houses of Congress conducted investigations into the charges made by Ralph Kelley, a former employee of the General Land Office, who publicly "attacked the decision in *Freeman* v. *Summers*" and "asserted that there had been fraud and favoritism in the issuance of patents" (App. A, *infra,* 9a). The court found that the *Freeman* v. *Summers* decision "was the center of attention of the House and Senate Committees," and that as a result of the committees' investigation, Congress "was thus fully informed on Interior's view and handling of the 'valuable mineral deposit' element of locations for oil shale." Although Congress took no action at the conclusion of the committees' investiga-

tions, and neither committee issued a report stating its findings,[4] the court noted that the chairman of the Senate committee wrote the Secretary that "there is no reason why your Department should not proceed to final disposition of the pending applications for patents to oil shale lands in conformity with the law" (App. A, *infra,* 11a). The court of appeals concluded (App. A, *infra,* 12a) that "we have what appears to be a unique situation where Congress made an intense investigation into Interior's interpretation of the mining laws as to a very specific and narrow circumstance, and approved it," making "an express determination that the practice had indeed become part of the mining laws and properly so."[5]

In our view, the court of appeals made too much of wholly inadequate evidence. The conclusion that a sub-

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[4] The House Committee on Public Lands did recommend legislation placing a deadline on the filing of applications for patent of oil shale claims, H.R. Rep. No. 2537, 71st Cong., 3d Sess. (1931), but the committee report did not address the decision in *Freeman* v. *Summers* or the discovery requirement. Indeed, the report quotes the Secretary's comment that "other phases" of the "general problem as to oil shale lands," such as "questions of discovery" might require legislative clarification. *Id.* at 8. The bill recommended by the Committee was not enacted.

[5] The court also noted what it viewed as a more recent indication of Congress' belief that oil shale claims were valid, the adoption in 1956 of an amendment to the mining laws making it easier for a locator with a pre-1920 claim to minerals now covered by the Mineral Leasing Act to take his claim to patent. The Act of July 20, 1956, ch. 652, 70 Stat. 592, amending 30 U.S.C. 122. In fact, however, as the district court recognized (App. C, *infra,* 36a), in enacting this legislation "Congress did not specifically address the problem of discovery at all," and moreover the amendment dealt with all the minerals withdrawn by the Mineral Leasing Act, not merely oil shale.

stantive amendment to the mining laws was accomplished when Congress simply took no action at the close of committee investigations is squarely at odds with this Court's analysis in recent cases such as *TVA* v. *Hill,* 437 U.S. 153 (1978), and *SEC* v. *Sloan,* 436 U.S. 103 (1978).

In *Hill,* TVA demonstrated that both the House and Senate Appropriations Committee Reports "generally reflected the attitude of the *Committees* either that the [Endangered Species] Act did not apply to Tellico or that the dam should be completed regardless of the provisions of the Act." 437 U.S. at 189 (emphasis in original). But, in the absence of a statement in legislation passed by the Congress that the Tellico dam was to be completed regardless of compliance with the Endangered Species Act, this Court was "unable to conclude that the Act has been in any respect amended or repealed." *Ibid.* The Court recognized, 437 U.S. at 191, that both committees had "expressly stated their 'understanding' that the earlier legislation would not prohibit the proposed expenditure" to complete the Tellico dam. But it observed that, despite the inclusion of these views in the committees' reports, "there is no indication that Congress as a whole was aware of TVA's position." 437 U.S. at 192. Accordingly, the Court held, quoting the *Regional Rail Reorganization Cases,* 419 U.S. 102, 132 (1974), that the committees' statements, " 'however explicit, * * * cannot serve to change the legislative intent of Congress expressed before the Act's passage.' " 437 U.S. at 193.

Similarly, in *SEC* v. *Sloan* this Court rejected the contention that Congress had adopted a longstanding

Commission construction that the Court concluded was "inconsistent with a statutory mandate." 436 U.S. at 118. The Court refused "to presume general congressional awareness of the Commission's construction" (436 U.S. at 121), even though Congress had reenacted the summary suspension authority "without disapproving the Commission's construction," when the Commission had "on at least one occasion made its views known to Congress in Committee hearings," and "at least one Committee [had] indicated on one occasion that it understood and approved of the Commission's practice." 436 U.S. 119, 120 (footnotes omitted). Moreover, the Court also stated that even if it were to assume Congress as a whole was aware of the Commission's construction of its summary suspension authority, it was questionable whether "such general awareness at the time of reenactment would be tantamount to amendment of what we conceive to be the rather plain meaning" of the statutory language. 436 U.S. at 121.

Thus, in *Hill* and *Sloan* the Court rejected the argument that Congress had in effect ratified an administrative construction as an amendment to previous legislation even though Committee reports recommending subsequent legislation adopted the agency's interpretation. Here, in contrast, the court of appeals found that Congress had effectively amended one of the principal requirements of the mining laws by its failure to take action after investigating Interior's actions. It is undisputed that no legislation was enacted, and no committee reports dealing with the discovery requirement were issued; the sole action taken was a letter to the Secretary from the chairman of one of the congres-

sional committees which did no more than state that the Department could "proceed to final disposition of the pending applications * * * in conformity with the law" (App. A, *infra,* 11a).

3. The court of appeals' decision clears the way for the patenting of an estimated 5 million acres of federal land in Colorado, Wyoming, and Utah to oil shale mining claimants. These lands, which include the richest oil shale deposits in the continental United States (see App. E, *infra,* 77a-78a), are also valuable for uses including grazing, recreation, and wildlife preservation. Before the Secretary is required to patent these lands to claimants who have not met the discovery requirement of the general mining laws, this Court should grant review.

CONCLUSION

The petition for a writ of certiorari should be granted.

Respectfully submitted.

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APPENDIX A

PUBLISH

United States Court of Appeals

TENTH CIRCUIT

No. 77-1346

SHELL OIL COMPANY AND D. A. SHALE, INC.,
Plaintiffs-Appellees,

v.

CECIL D. ANDRUS, SECRETARY OF THE INTERIOR,
Defendant-Appellant.

Appeal from the United States District Court for the District of Colorado (D.C. # 74-F-739)

Before SETH, Chief Judge, LOGAN, Circuit Judge, and STANLEY, District Judge.*

SETH, Chief Judge.

The Secretary of the Interior issued in September of 1964 an administrative complaint asserting that the shale oil placer mining claims here in issue were invalid. The grounds advanced for the contest were that they did not contain valuable minerals on February 25, 1920, nor do such minerals now exist on the claims. There were also applications for patent then pending. The contest proceedings were heard over a five-month

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* Of the District of Kansas, Sitting by Designation.

period by Administrative Law Judge Dalby in 1967, and he announced his decision in 1970. Twenty-six witnesses appeared; there were some 1,700 exhibits, and over 5,000 pages of transcript. The Administrative Law Judge concluded that the claims were valid, and that patents should issue.

The Government took an appeal to the Interior Board of Land Appeals (IBLA) in the Department which reversed in 1974 and held the claims to be invalid. (16 IBLA 112). The Secretary of the Interior then ordered the claims to be cancelled. The owners then obtained review of the Secretary's order in the United States District Court for the District of Colorado by these proceedings. The trial court on cross-motions for summary judgment entered judgment for the owners of the claims, and thus held the claims to be valid.

This appeal was then taken by the Government on the administrative record and the judgment of the trial court.

What constitutes a "discovery" and what may be a "valuable mineral deposit" has been the subject of many administrative proceedings and litigation. The "valuable" element has been considered under many interrelated "tests" including intrinsic value, prudent man, and marketability. It would not seem necessary to discuss the many variations. Reference should be made however to the early "prudent man" decision, Castle v. Womble, 19 L.D. 455 (1894), to United States v. Coleman, 390 U.S. 599; Enfield v. Klepee, [sic] 566 F.2d 1139 (10th Cir.); United States v. Zweifel, 508

F.2d 1150 (10 Cir.); United States v. Adams, 318 F.2d 861 (9th Cir.); United States v. Strauss, 58 I.D. 567 (1943); Jefferson-Montana Copper Mines Co., 41 L.D. 320 (1912); United States v. Black, 64 I.D. 93 (1957); United States v. Heirs of Stack, A-28157 (1960). *See also* 7 Rocky Mountain Mineral Law Institute 263; 1 American Law of Mining § 4.31; and 1 Lindley Mines § 98 (3d Ed.).

Under the mining laws, Act of July 4, 1866, Act of May 10, 1872, and Act of June 22, 1874, now generally 30 U.S.C. § 22, public lands of the United States not withdrawn from entry and containing valuable mineral deposits are open for location with some exceptions not here concerned. Nonmineral entries cannot be made on public lands deemed valuable for minerals. 30 U.S.C. § 23 relates to lode claims and § 35 provides that placer claims should be located under like circumstances and conditions and upon similar proceedings as are provided for lode claims. For lode claims there must be a discovery of a vein or lode and also a discovery of a valuable mineral deposit. For a placer claim there need only be a discovery of a valuable mineral deposit. We are here concerned with placer claims located for oil shale before the Mineral Leasing Act of 1920, 30 U.S.C. § 181.

Everything considered, it must be concluded that the "valuable mineral deposit" standard or requirement was not met as to oil shale claims of the type here considered before 1920 as the standards were applied to the metallic minerals. The lack of conformance came about as to the immediate saleability of the oil

shale or profitability as compared to other minerals. The shale was obviously different in this regard, and for the claims here concerned to be valid as found by the District Court and the Administrative Law Judge, it must be established that oil shale deposits were treated differently by the then General Land Office and the Secretary for the location of placer claims for oil shale.

The record before us does demonstrate that the value element attributed to substantial oil shale deposits to support claims was expressly treated differently than for metallic minerals by the Department of the Interior for the period 1915 to 1960. This was clearly the case as to the Green River Formation on which the subject oil shale claims are located. The mining laws were thus interpreted differently for oil shale by departmental practice, official instructions and decisions.

The record shows the ebb and flow of interest in oil shale during the period 1915 to the present time. It shows the intense interest in it as a source of oil for the Navy and to replace "foreign" oil in 1918. This was a period of decline in domestic crude oil production relative to demand, and dependence on foreign oil increased. The Department of the Interior by its publications and policies strongly encouraged the location of claims on oil shale deposits in the pre-1920 period. In 1913 there was a USGS Bulletin published on the Green River Formation oil shale, and others followed. It was a period of the creation of Naval reserves for oil, and for oil shale. The oil shale reserves for the Navy were created in Colorado and Utah by presiden-

tial order in 1916. There was then in Great Britain a method in use for extracting oil from the shale, and no problems were contemplated.

During the period 1918 to 1920 Congress was holding hearings on what became the Mineral Leasing Act of 1920, and eventually placed oil and gas and oil shale under a system of leasing rather than by placer locations. This Act made special reference to existing oil shale claims and did nothing to impair their validity. 30 U.S.C. § 193.

The Department by 1920 had thus determined that oil shale deposits, if demonstrated to contain sufficient oil, were "valuable mineral deposits" although there was no immediate market.

The Government in these proceedings has acknowledged that these claims met the discovery requirements under the 1916 to 1920 standards applied by the Department of the Interior. This was because there had been an administrative determination that valid locations could then be made on the Green River Formation oil shale beds if all other elements of a proper location were present. The geology was obviously well known, uncomplicated, and the beds were conspicuous.

After 1920 the Department of the Interior continued to patent pre-1920 oil shale claims, and the record shows that there was a careful examination of patent applications for compliance with the mining laws and to determine whether substantial oil reserves were present. There is nothing in the record before us to indicate any routine approval of such claims.

In 1927 the departmental decision in a contest be-

tween a homestead entry and an oil shale claim was issued, captioned in part Freeman v. Summers, 52 L.D. 201. This decision referred to Castle v. Womble, 19 L.D. 455, and held in substance what had been the prior administrative determination that oil shale could be considered a valuable mineral deposit.

Freeman v. Summers, in part says:

> "While at the present time there has been no considerable production of oil from shales, due to the fact that abundant quantities of oil have been produced more cheaply from wells, there is no possible doubt of its value and of the fact that it constitutes an enormously valuable resource for future use by the American people.
>
> "It is not necessary, in order to constitute a valid discovery under the general mining laws sufficient to support an application for patent, that the mineral in its present situation can be immediately disposed of at a profit."

And also:

> "The evidence in this case shows that in this particular area of Colorado the lands contain the Green River formation, and that this formation carries oil shales in large and valuable quantities; that while the beds vary in the richness of their content, the formation is one upon which the miner may rely as carrying oil shale which, while yielding at places comparatively small quantities of oil, in other places yields larger and richer quantities of this valuable mineral.

> "In other words, having made his initial discovery at or near the surface, he may with assurance follow the formation through the lean to the richer beds.
>
> "There can be no question whatever as to the greater value of the lands for their oil-shale deposits than for other purposes. Their agricultural value is negligible; their value for grazing purposes is nominal, and the real and principal value is the mineral deposit."

This determination as to value continued from 1916 to 1960, and patents were issued for oil shale claims. Some 2,326 patents were so issued. The *Freeman* decision was not particularly significant at the time, but in 1930 became the center of attention. The 1931 Report of the Secretary of the Interior stated that by then some 195,000 acres had been patented. He also estimated that the "oil shale area" in Colorado consisted of 1,496,027 acres, in Utah 2,754,950 acres, and in Wyoming 4,006,-805 acres.

There were also "Instructions" of general application issued by the Secretary of the Interior relative to the handling of applications to patent oil shale claims, dated May 10, 1920. *See* 47 L.D. 547-551. This was in response to a request for instructions from the Commissioner of the General Land Office in April 1920 relative to the first oil shale patent to be issued after the Mineral Leasing Act—the La Paz claims. These Instructions said in part: "Oil shale had long been recognized as a valuable mineral deposit and for many

years the mining of such deposits and distillation of petroleum and other mineral substances therefrom has been an extensive industry in Scotland, . . . While there are no oil shale operations in the United States that have reached that point of commercial development or production . . . ," there are publications as to processes and some experimental plans. The Instructions also refer to the requirement that homestead entries are subject to restrictions as to oil shale. The Instructions then concluded:

> "Oil shale having been thus recognized by the Department and by Congress as a mineral deposit and a source of petroleum, and having been demonstrated elsewhere to be a material of economic importance, lands valuable on account thereof must be held to have been subject to valid location and appropriation under the placer mining laws, to the same extent and subject to the same provisions and conditions as if valuable on account of oil or gas. Entries and applications for patent for oil shale placer claims will, therefore, be adjudicated by your office in accordance with the same legal provisions and with reference to the same requirements and limitations as are applicable to oil and gas placers."

There were before and after the time we have mentioned several instances of similar administrative determinations that entries could be made for specified minerals. These included in 1883 lands containing borax, sulphur, alum, and nitrates of soda, and Con-

gress in 1892 had declared that lands containing building stone were subject to placer location. Also Congress changed the law in 1955 so that sand, gravel, and other common varieties were no longer "valuable mineral deposits" to permit locations. Thus from time to time certain minerals or substances were declared subject to location, and also changes made when the need arises.

Thus the Department continued to examine applications, and, if approved, to issue patents for oil shale claims in accordance with the Instructions and the *Freeman* opinion as any other patents, and some 2,326 oil shale patents were issued. There was a period of time from about September 30, 1930, to the middle of 1931 when the issuance of oil shale patents was suspended. This period will be considered hereinafter.

The departmental standards for the examination of applications for patent of oil shale claims continued in the manner described above until the end of September 1930. By that time some 1,171 patents had issued on oil shale claims. The processing of patent applications stopped because a Mr. Kelley, who was Chief of the Field Division of the General Land Office in Denver, then published his letter of resignation. This letter attacked the departmental policies as to the issuance of patents for oil shale claims, and attacked the decision in *Freeman v. Summers*. It also asserted that there had been fraud and favoritism in the issuance of patents. This raised a cry of scandal in the press. The *New York World* paid Mr. Kelley some $12,000.00 for his story, and the matter became something of a sensation. There was thus great publicity, and Mr. Wil-

bur, the then Secretary of the Interior, answered the charges. There was thus great interest in the matter largely because the Teapot Dome scandal had but recently quieted down. The Teapot Dome scandal was, of course, of nationwide interest and involved several leading business figures, and resulted in the conviction of the Secretary of the Interior Fall. The matter concerned bribes for the issuance of oil and gas leases in Teapot Dome and Elk Hills.

Congress began an investigation into the charges made by Mr. Kelley. The Senate Committee was headed by Senator Walsh, who had been a leading figure in the Teapot Dome investigations which had, of course, centered on the Interior Department's oil and gas leasing practices.

We are only concerned because the interest of Congress was intense, and the investigation was very significant for the problem before us for the reason that it centered directly upon the standards used to examine oil shale patent applications, and because it was specifically directed to the decision of *Freeman v. Summers*. In fact, the first day of the Senate hearings, Solicitor Finney who had drafted the *Freeman v. Summers* opinion (52 L.D. 201) appeared and was questioned about it. The opinion in *Freeman* would not otherwise be of much significance, but it became important by reason of the fact it was the center of attention of the House and Senate Committees.

The investigations by Congress were thus intensive upon the very matters concerned in this case, and Congress was thus fully informed on Interior's view and

handling of the "valuable mineral deposit" element of locations for oil shale described above. We must conclude that Congress approved the departmental standards as set out in the *Freeman* case and in the Instructions as proper application of the mining laws. There were, of course, many things Congress could have done to change the practice as this was a matter of interpretation of the mining laws, and wholly within Congressional authority to change.

The House Committee concerned with the investigation recommended some legislation which would have put a deadline on filing applications for patent of oil shale claims (H.R. 2547, 71st Cong., 3d Sess.). Senator Nye, then Chairman of the Senate Committee, wrote a letter, at the conclusion of the hearings, to the Secretary of the Interior. This letter of April 1931 in part said:

> "Responding now to your letter of April 10, I have conferred with Senator Walsh and beg to advise that there is no reason why your Department should not proceed to final disposition of the pending applications for patents to oil shale lands in conformity with the law."

After the above advice, the Department resumed the examination of oil shale patent applications per the Instructions and *Freeman v. Summers,* along with all the other patent applications. There were about 1,149 oil shale patents issued thereafter until issuance was abruptly stopped in 1961.

The record shows also that the Department of Justice

conducted in 1930 an investigation of the same matters, and a report was filed in October 1930, and Secretary Wilbur was advised.

Thus we have what appears to be a unique situation where Congress made an intense investigation into Interior's interpretation of the mining laws as to a very specific and narrow circumstance, and approved it. This indeed bears no resemblance to the many Congressional silence cases, and removes any uncertainty as to whether the matter actually received attention, and also constitutes an express determination that the practice had indeed become part of the mining laws and properly so.

As mentioned above, the Department continued after the Congressional investigation to handle the patenting of oil shale claims, and the discovery-value element as before. This appears to be what Congress intended.

There was another interaction between Interior and Congress some twenty-five years after the investigation relating to oil shale claims. This arose in 1955 and 1956. There had developed during the previous years some conflicts between shale claims going to patent and homestead entries. The Act of July 17, 1914, 30 U.S.C. § 121, permitted homestead entries to be patented although there might be valuable minerals thereon, including "oil," if the minerals were reserved to the United States. This problem is described in our opinion in Brennan v. Udall, 379 F.2d 803 (10th Cir.). We there said:

> "Although the position of the Department of the Interior has varied over the years as to the form

of the reservation in patents embracing oil shale lands, it is abundantly clear that for fifty years it has consistently construed the 1914 Act to authorize the classification of lands containing oil shale deposits as a valuable source of petroleum and nitrogen and to require the reservation of such deposits where patents are issued. The Department's construction of the statute has been made a matter of public record on numerous occasions. . . ."

The other side of the homestead-shale claim conflict concerned patents sought by shale claim locators whose claims included land within the 1914 Act homestead patents. The Department's practice was to require the person seeking the oil shale patent to purchase the surface within the claim boundaries and convey it to the United States. Legislation was sought to change this requirement to permit the claim to go to patent although the surface was not owned by the United States. Interior supported this legislation and submitted a response to a request by Senator Murray for comment. This statement of the Secretary in part said: ". . . The problem which S. 2115 is presumably intended to clear up concerns the valid and subsisting rights acquired by discovery and location under the mining laws made prior to the enactment of the Mineral Leasing Act of February 25, 1920. . . ." The statement continued: "Though we heartily endorse the purpose of S. 2115 we believe certain amendments . . . ." Thus again Congress and the Department acted to permit the patenting of oil shale claims. This was to make

the patenting less burdensome on the locators and to recognize the rights acquired by the pre-1920 discovery "under the mining laws."

The Mountain Boy Claims 6 and 7 were located in 1918, and a second application for patent was filed in 1958 after a series of title problems was resolved. The final certificate was issued for patent and the file was sent to Washington for review and issuance of a patent. Assessment work had been done through the years. The Shoup Claims 1, 2, 3, and 4 were located in 1917. There was development work performed, including construction of a plant. There were some accidents, and a long period of litigation. The claims were challenged in 1928 and they were held to be valid by the Department in 1935 after hearings.

The two groups of claims are contiguous, are located in Garfield County, Colorado, in Section 14 and Section 23, of Township 7 South, Range 97 West, 6th Principal Meridian.

The claims were considered to be properly located under the 1916-1920 standards by the parties. The hearings herein as to current conditions included testimony by the Interior witnesses that there were large deposits of Green River Formation oil shale on the claims. The record shows there was a thickness of 500 to 600 feet of shale which would yield 96,000,000 barrels of oil per claim, and an additional 95 feet of shale which would yield some 20,000,000 more barrels of oil per claim. An Interior witness testified that shale from these claims could have been marketed at a profit when they were located, and at present. Dr. Vogelz testified for In-

terior that oil shale has had a value from 1917 to the present. The cost studies prepared by the Department also showed that a profitable operation was possible.

It is apparent under Cole v. Ralph, 252 U.S. 286, that a locator or owner of an unpatented claim, properly located, has a vested property interest therein. This has been universally recognized by the courts. Thus, if we recognize that the Department has acknowledged that there was a valuable mineral deposit in 1920, and at the time the claims were located, there is no discovery defect as to the locations. Since this was the only defect asserted in the contest, we must assume that the claims were valid as unpatented claims under departmental standards up until the 1961 change of policy by the Department which was sought to be applied retroactively. The owners of the claims thus had a vested property interest in the claims, unless in 1961 oil shale was not a valuable mineral deposit in 1920.

As mentioned at the outset, the Department filed proceedings to contest the claims described in the preceding paragraph. The Administrative Law Judge concluded they were valid; the Department of the Interior held them to be void; and the District Court decided that they were valid and should not have been cancelled.

The contest of these claims in 1961 marked a complete departure by the Department from the rules, the instructions, and the standards of the Department which had prevailed without exception, departure, or variation from 1915. It is also apparent from the departmental position expressed in 16 IBLA 112 (1974) that the decision of the Department reversing the Ad-

ministrative Law Judge represented a complete abandonment and reversal of everything which had gone before as to "discovery" on oil shale claims. Thus the Department concluded:

> ". . . Accordingly, we are not concerned with the assessment work requirements of 30 U.S.C. § 28 (1970), but with the question of discovery within the meaning of the mining laws. We hold that no discovery of a valuable mineral deposit has been established on the claims at issue herein."

The IBLA opinion is quite long. It discussed *Castle v. Womble,* and the prudent man test for "valuable," and the marketability test. It also reviews the history of oil shale. It recites that: "Between 1920 and 1960 the Department consistently recognized oil shale as a valuable mineral deposit," and refers to *Freeman v. Summers.* It asserts that there could have been no reliance on departmental policy. The substance of the opinion is that the Department no longer considers oil shale to be a valuable mineral deposit under the mining laws. No reason is given for the complete departure from the previous holdings. It is apparent that no changes in circumstances relative to oil shale and its development have come about. It is purely a change in departmental policy which came about by a change in the philosophy of the personnel. Thus in 1920 the Department said oil shale was "valuable" then, and in 1961 and 1974 the Department says oil shale was not "valuable" in 1920. The question is whether such a policy change can bring about the consequences sought to be obtained by the

Department, considering all that has taken place in the forty-year period. It must be pointed out that the Department since 1920 has been seeking to lease oil shale under the Mineral Leasing Act to persons who would undertake development and was able to obtain in 1974 a 210-million dollar bid on a tract offered for lease.

We must hold that the Department is not free to so change the application of the general mining laws as to the oil shale locations here under consideration. The different treatment afforded all oil shale claims as to the "valuable mineral deposit" element of a location became a part of the general mining laws by reason of its adoption and approval by both Houses of Congress during the intensive investigations of this very question and their affirmative resolution of the issue. The general mining laws were thus adjusted to accommodate the then very important practical and legal problem.

We do not put this in the category of Congressional reenactment after an administrative interpretation. There are, of course, a large number of cases in a variety of circumstances which relate to reenactments. As indicated, we are of the view that the circumstances here present take the case far beyond the doctrine set forth in these cases, and into something quite different, but they demonstrate the variety of circumstances and show the firm basis for the presumptions arising from reenactment alone. These cases were referred to by the trial court (426 F. Supp. 894), and include NLRB v. Bell, 416 U.S. 267, concerning "managerial employees"; Cammarano v. United States, 358 U.S. 498, "ordinary and necessary" business expenses; Corn Prod-

ucts Refining Co. v. Comm'r, 350 U.S. 46, purchase of "futures"; and *see* NLRB v. Gullett Gin Co., 340 U.S. 361, and Brennan v. Udall, 379 F.2d 803 (10th Cir.).

Instead of reenactment, and silence on the issue, as an acceptance of interpretation, we regard the events hereinabove described as an affirmative adoption of the very basic application of the mining laws to make it part of the statutory method for development of the oil shale reserves. It was obviously considered to be part of such an exploitation as the reserves were considered very essential. It is equally apparent that other events transpired to forestall the use of oil shale as a source of oil. These events included a large increase in domestic oil production and cheap foreign oil. Some of these events and the subsequent variations thereon came about through the actions of the Government. Thus Congress may have been wrong in its estimate as to the timing of oil shale development, but that is no reason to now change the mining laws without the benefit of Congressional consideration. In short, the changes here sought to be made by the Department as to 1920 standards incorporated in the mining laws are well beyond executive authority.

This is no more than an application of the doctrine developed over the years in the reenactment cases but in the presence of the added significant element described above at some length,—the extensive participation by Congress in the specific issue.

Thus in Corn Products Refining Co. v. Comm'r, 350 U.S. 46, the Court said after referring to three reenactments of the Tax Code and recognition for twenty

years: "This bespeaks congressional approval. *Helvering v. Winmill,* 305 U.S. 79, 83." The Court then added the other element: "Furthermore, Congress has since specifically recognized the hedging exception here under consideration in the short-sale rule of § 1233(a) of the 1954 Code."

In United States v. Leslie Salt Co., 350 U.S. 383, the Court considered Treasury's long-standing construction of what a "debenture" was and what was a "certificate of indebtedness." The Court referred to the *Corn Products* case, and the importance therein given to contemporaneous construction; then it said of the department's sudden change in definition:

> ". . . Against the Treasury's prior longstanding and consistent administrative interpretation its more recent *ad hoc* contention as to how the statute should be construed cannot stand. Moreover, that original interpretation has had both express and implied congressional acquiescence, ..."

The Court also in *Leslie Salt* refers to its opinion in Norwegian Nitrogen Products Co. v. United States, 288 U.S. 294.

The importance given to "contemporaneous" construction by the administrative officials must not be overlooked, and reference must be made again to *Leslie Salt*. Thus the officials in Interior from top to bottom considered the application of the mining laws to shale oil. This was "new," not, of course, as a new law but a new mineral. It was a "contemporaneous" construc-

tion also in the sense of an application of the law to a new situation, an application calling for a standard to be applied. It was in 1920 a "contemporaneous construction" to be given the specific consideration suggested by the Court. It is even more significant because of the attempted retroactive application to 1920 of this new and totally different position.

We do not reach the retroactive aspect as a separate issue. The doctrine relating to retroactive application of policy changes and statutory construction by agencies with the need for a "compelling reason" is considered in Logan v. Davis, 233 U.S. 613; Rough Rider, 41 L.D. 242, and in James v. Bell, 52 L.D. 197.

The combination of circumstances we have before us presents a unique situation which, as we have said above, constituted an addendum to the mining law which cannot be removed short of Congressional action. It is simply an application of the doctrine arising in the reenactment cases referred to above with special emphasis on the added element of affirmative action by Congress. The affirmative action by Congress on the point here is overwhelming.

Thus the judgment of the District Court is AFFIRMED.

APPENDIX B

UNITED STATES COURT OF APPEALS
FOR THE TENTH CIRCUIT

January Term—January 25, 1979

Before Honorable Oliver Seth, Chief Judge,
Honorable James K. Logan, Circuit Judge,
Honorable Arthur J. Stanley, Jr., Sr. District Judge.

SHELL OIL COMPANY and D. A. SHALE, INC., *Plaintiffs-Appellees,* vs. CECIL D. ANDRUS, Secretary of the Interior, *Defendant-Appellant,* STATE OF UTAH, *Amicus Curiae.*	JUDGMENT No. 77-1346 (D.C. No. 74-F-739)

This cause came on to be heard on the record on appeal from the United States District Court for the ..... District of Colorado, and was argued by counsel.

Upon consideration whereof, it is ordered that the judgment of that court is affirmed.

/s/ Howard K. Phillips
HOWARD K. PHILLIPS, Clerk

APPENDIX C

SHELL OIL COMPANY and
D. A. Shale, Inc., Plaintiffs,

v.

Thomas S. KLEPPE, Secretary of the
Interior, Defendants.

Civ. A. No. 74-F-739.

United States District Court,
D. Colorado.

Jan. 17, 1977.

FINESILVER, District Judge.

This matter is before the Court on cross-motions for summary judgment. This case is another installment of the long-enduring and multi-faceted litigation over oil shale, a mineral principally located in the Western states. For the ten year history of oil shale litigation, see *The Oil Shale Corp. v. Udall,* 261 F.Supp. 954 (D. Colo.1966), *aff'd,* 406 F.2d 759 (10th Cir. 1969), *rev'd sub nom., Hickel v. Oil Shale Corp.,* 400 U.S. 48, 91 S.Ct. 196, 27 L.Ed.2d 193 (1970), *conformed to, The Oil Shale Corp v. Morton,* 370 F.Supp. 108 (D.Colo.1973), *remanded* Sept. 22, 1975 (10th Cir.), *cert. denied, The Oil Shale Corp. v. Kleppe,* 426 U.S. 949, 96 S.Ct 3169, 49 L.Ed.2d 1185 (1976), *dec'n pending,* No. 8680 (D. Colo.).[1]

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[1] Other oil shale cases have recently been before this Court. *United States v. Eaton Oil Co.,* C–4139 (Complaint filed July 11, 1972); *U. S. Mobil Oil & Equity Oil Co.,* C–4135 (Settled Nov. 1, 1976); *Amerada Hess Corp. v. Morton,* C–4361 (Complaint filed September 26, 1972).

In the instant litigation, Plaintiffs seek judicial review of a decision of the Board of Land Appeals in the Department of Interior, *United States v. Frank W. Winegar, et al.*, IBLA 70-549, June 28, 1974, reported at 16 IBLA 112, 81 I.D. 370 (hereinafter *Winegar*), in which plaintiffs' oil shale placer mining claims were held invalid on the ground that these claims did not constitute discoveries of a valuable mineral deposit pursuant to 30 U.S.C. § 22 *et seq.* We have reviewed the *Winegar* decision, the voluminous briefs, the extensive administrative record, and have undertaken our own independent research. Plaintiffs' Motion for Summary Judgment is GRANTED.

I

The factual background of this litigation is set out in *Winegar*. The six oil shale placer mining claims in dispute, Mountain Boy Nos. 6 and 7 and Harold Shoup Nos. 1, 2, 3, and 4, were located in 1917 under the Act of May 10, 1872, 30 U.S.C. § 22 *et seq.* The Mineral Lands Leasing Act, 30 U.S.C. § 181 *et seq.*, subsequently withdrew oil shale from location but preserved "valid claims existent on February 25, 1920, and thereafter maintained in compliance with the law under which initiated, which claims may be perfected under such laws, including discovery." 30 U.S.C. § 193. By various mesne conveyances, the plaintiffs acquired title to the claims.

The instant controversy began on September 8, 1964, when the Manager, Colorado Land Office, Bureau of

Land Management, issued complaints on behalf of the United States alleging the invalidity of the claims due to a failure to discover a valuable mineral deposit. The traditional standard for determining that a valuable mineral deposit had been discovered is whether or not a prudent person would be justified in believing the deposit could be developed, extracted, and marketed at a reasonable profit. *Freeman v. Summers,* 52 L.D. 201 (1927) (hereinafter *Freeman*), held that *present* development and marketability at a reasonable profit is not necessary for deposits of oil shale. Rather, the claimant must only establish that the oil shale deposits constitute a valuable resource for *future* use and development.

Administrative Law Judge Dent D. Dalby found that the claimants did not meet the standard mining law test for a valuable resource. If he had been ruling as a matter of first impression, he would have determined the claims to be invalid. However, he found that the claimants had established that the oil shale deposits constituted a valuable resource for future use and development. Under the *Freeman* standard, he held all six claims to be valid, except for 35.4 acres of Harold Shoup No. 3 which were non-mineral in character, and are not before us on appeal.

The United States appealed the ruling to the Interior Board of Land Appeals (hereinafter the Board). The Board reversed the administrative law judge, and held the six claims to be null and void, explicitly overruling *Freeman.* The Board held that in order to satisfy the

requirement of discovery of a valuable mineral deposit, it must be shown that the deposit could have been developed, extracted, and marketed at a reasonable profit on February 25, 1920 (the date of the withdrawal of oil shale lands from location), and at all subsequent times without substantial interruption, up to the time of the contest proceedings. The Board adopted Administrative Law Judge Dalby's factual findings that despite considerable investment over the years in various techniques of extracting oil from oil shale, no prudent person was justified in believing the deposits could be presently developed, extracted and marketed at a reasonable profit.

The Board held that the claims here in issue had been filed not on the basis of their then current value—oil shale could not then be developed—but in anticipation that the oil shale would someday become a valuable mineral. The 1872 Mining Act had opened further land to exploration and purchase of "valuable mineral deposits". The overall effect of the Board's ruling was to invalidate 50,000 old mining claims. The Board's ruling expressly invalidated only six claims filed before 1920, but its precedent endangers all other pre-1929 oil shale claims covering at least 500,000 acres of Federal land in Colorado, Utah and Wyoming. One news article commented on the ruling in these words:

> But the board's ruling, unless appealed and reversed in court, would mean that no pre-1920 oil shale claim can be patented and these old claims

would be open to department action invalidating them.

"Board Ruling Imperils Oil-Shale Claims," *Denver Post* (July 2, 1974).

The claimants seek review of the decision of the Department of Interior declaring their oil shale claims invalid. They contend that (1) the rule of discovery set out in *Freeman* is a proper application of the traditional and long-established requirements of the mining laws; (2) this rule has received Congressional review and approval; (3) the Interior Department is estopped from applying any other rule to the plaintiffs' claims; and (4) the United States Government has recognized oil shale deposits as valuable mineral deposits under the mining laws. These and other contentions are discussed in Parts III and VI below.

II

[1, 2] Final decisions of the Board of Land Appeals within the Department of Interior denying the validity of mining claims are clearly reviewable under the Administrative Procedure Act, 5 U.S.C. § 701 *et seq.; Nickol v. United States,* 501 F.2d 1389 (10th Cir. 1974). The issues raised by the parties in this case are within the scope of review, namely, whether the agency's ruling is supported by law and by substantial evidence. 5 U.S.C. § 706; *Citizens to Preserve Overton Park, Inc. v. Volpe,* 401 U.S. 402, 414, 91 S.Ct. 814, 28 L.Ed. 2d 136 (1971); *Universal Camera Corp. v. National Labor Relations Board,* 340 U.S. 474, 71 S.Ct. 456, 95

L.Ed. 456 (1951); *Henrikson v. Udall,* 350 F.2d 949, 950 (9th Cir. 1965), *cert. denied,* 384 U.S. 940, 86 S.Ct. 1457, 16 L.Ed.2d 538 (1966).

III

[3] Mining laws require the discovery of a valuable mineral deposit prior to the location of a valid claim. 30 U.S.C. §§ 22, 23, 25 and 29; *Best v. Humboldt Placer Mining Co.,* 371 U.S. 334, 83 S.Ct 379, 9 L.Ed.2d 350 (1963); *Cameron v. United States,* 252 U.S. 450, 40 S.Ct. 410, 64 L.Ed. 659 (1920). The traditional definition of discovery is embodied in *Castle v. Womble,* 19 L.D. 455, 457 (1894);

> In this case the presence of mineral is not based upon probabilities, belief and speculation alone, but upon fact, which . . . show that with further work a paying and valuable mine, so far as human foresight can determine, will be developed.
>
> After a careful consideration of the subject, it is my opinion that where minerals have been found and the evidence is of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine, the requirements of the statute have been met.

This definition has been consistently affirmed. *United States v. Coleman,* 390 U.S. 599, 88 S.Ct. 1327, 20 L.Ed. 2d 170 (1968); *Best, supra; Cameron, supra; Chrisman*

v. Miller, 197 U.S. 313, 25 S.Ct. 468, 49 L.Ed. 770 (1905).

The "prudent-person test" in *Castle v. Womble* has been elaborated upon by the "marketability test," that is, whether the mineral can be removed and extracted at a profit:

> Under the mining law Congress has made public lands available to people for the purpose of mining valuable mineral deposits and not for other purposes. The obvious intent was to reward and encourage the discovery of minerals that are valuable in an economic sense. Minerals which no prudent man will extract because there is no demand for them at a price higher than the costs of extraction and transportation are hardly economically valuable. Thus, profitability is an important consideration in applying the prudent-man test, and the marketability test which the Secretary has used here merely recognizes this fact. (Footnotes omitted)

United States v. Coleman, supra, 399 U.S. at 602-603, 88 S.Ct. at 1330. The *Coleman* opinion points out that the prudent-person test and the marketability test are essentially the same; the latter is simply a logical extension of the former.

The parties agree upon this basic definition. Thus, the pivotal issue of the dispute lies in whether it was correctly applied to oil shale in the *Freeman* case. *Freeman* deals with two issues relating to the discovery of oil shale: (1) the extent to which a discovery of an

outcropping of oil shale on the surface indicates to a prudent person the existence of a bed of oil shale below the surface substantial enough in size to warrant development; and (2) whether oil shale need be presently disposable at a profit. Since it is conceded by the government that the plaintiffs' claims contain substantial amounts of very rich oil shale, it is only the latter issue in *Freeman* which concerns us now.

Freeman held that the claimants did not have to prove that they could presently profit from the development of their oil shale claims:

> While at the present time there has been no considerable production of oil from shales, due to the fact that abundant quantities of oil have been produced more cheaply from wells, *there is no possible doubt of its value and of the fact that it constitutes an enormously valuable resource for future use by the American people.*
>
> It is not necessary, in order to constitute a valid discovery under the general mining laws sufficient to support an application for patent, that the mineral in its present situation can be immediately disposed of at a profit. (Emphasis added)

Freeman at 206. This case appears to extend the doctrine of discovery beyond the traditional limits of the paying and valuable mine test in *Castle v. Womble* and subsequent Supreme Court opinions adopting that principle. Those cases speak in terms of the present expenditure of labor and resources in order to develop a presently profitable mine, rather than the future

developmental value of the mineral deposit. *Roberts v. Morton,* 549 F.2d 158 (10th Cir. 1976) re-affirmed the present marketability test for alumina deposits located in oil shale land.

The claimants argue that "the present value of a mineral deposit is usually dominated by the present appraisal of the future," in other words, the estimated future worth of the oil shale should be discounted to current values. Plaintiffs' Opening Brief at 130-131. The administrative law judge in his findings of fact agreed with the claimants and expressly found that the future value of oil shale has a certain economic worth, even a substantial economic worth in present-day terms. The discounted future value of a mineral deposit may well be a significant factor to the prudent person in determining whether he can profitably develop the deposit. However, the discounted future value of a mineral deposit is by itself insufficient to meet the marketability and prudent person tests of *Coleman* and *Castle v. Womble.*

[4] For purposes of these pre-1920 oil shale claims, however, *Freeman* does not represent an unwarranted extension of the traditional tests for discovery. Merely speculative claims are not discoveries of valuable mineral deposits under the *Freeman* standard. *Freeman* only extended the prudent person test to a mineral that the prudent person justifiably believed would *inevitably* become valuable, or would become marketable by the time the oil shale deposits could be sufficiently developed, and not only if the demand for the ultimate product were changed. *Roberts, supra, Coleman,* and

Castle v. Womble are distinguishable because they did not have to consider the unique position of oil shale. Of most significance to our decision is the fact that because oil shale deposits contain a potential domestic source of energy, the Government itself has acted to create a market and to encourage prudent investors to stake claims in oil shale deposits. Part V, *infra*.

IV

Claimants contend that *Freeman* is in effect an expression of Congressional intent to establish special rules of discovery for oil shale, and that to overrule it would be an interference with Congress' legislative authority. They point specifically to the legislative history of the Mineral Lands Leasing Act of 1920, an administrative ruling shortly thereafter, a general executive and congressional review of oil shale claims in 1930-31, and the enactment in 1956 of an amendment to the mining laws relating to the patenting of oil shale claims. This argument raises two issues: whether Congress did in fact approve the rule of discovery in *Freeman* and, if so, whether the nature and form of the approval warrants giving it such force that only Congress itself can repeal or overrule it.

The legislative history of the Mineral Lands Leasing Act of February 25, 1920 is unclear concerning the Congressional policy for the requirements of discovery of oil shale. As early as 1916, the Department of Interior proposed the withdrawal of oil shale lands from entry, location, and patenting under the Act of May 10, 1872, 30 U.S.C. § 22 *et seq.*, and the placement of the

lands under a leasing program. *Hearings on H.R. 406 Before the Senate Committee on Public Lands,* 64th Cong., 1st Sess., at 301, 320-321 (1196). The motivation for this and subsequent proposals was Congressional perception of the significant value of oil shale as an important source of petroleum to replace other rapidly dwindling supplies. The general view of witnesses and Congressmen was that development of oil shale was at that time not commercially feasible but would be in the near future. *Hearings on H.R. 406, supra; Hearings on S. 45 Before The Senate Committee On Public Lands,* 65th Cong., 1st Sess., pt. 4, at 250-253 (1917); *Hearings on H.R. 3232 and S. 2812 Before the House Committee on Public Lands,* 65th Cong., 2nd Sess., at 811 *et seq.* (1918); 56th *Cong. Rec.* 6984-6987 (1918).

Although the Mineral Lands Leasing Act of 1920 indicated a sharp change in the government's policy of disposing of its material resources, § 37 of that act, now 30 U.S.C. § 193, preserved existing, valid claims to oil shale. Few comments were made concerning this section, and even fewer were directed to the requirements of a valid discovery of oil shale. The remarks of Congressman Taylor of Colorado, one of the managers of the bill in the House, are typical:

> Yet the Senate and the House have both always retained in every bill of this kind the provisions of section 37 and expressly recognized and legalized and attempted to affirmatively protect the property and legal rights under the laws as they are now and have for over 40 years been on our

> statute books of the honest prospectors, the bona fide locators in good faith, and holders of rightful claims, claims that are valid and existing under existing laws at the date of the passage of this act. Those claimants, even though they may not have perfected a legal discovery under the laws are entitled to go ahead and maintain and perfect their claims under the present existing laws and obtain a patent to their lands just as though this bill had never been passed, and I hope no court or Federal department will ever attempt to deny to these people the rights which Congress looks upon as vested and is attempting in section 37 to guarantee to them.

59 *Cong. Rec.* 2711-2712 (1920). See also 59 *Cong. Rec.* 2709 (1920); 58 *Cong. Rec.* 4444 (1919); 58 *Cong. Rec.* 457-4584 (1919).

The rule of discovery at that time was the prudent person test of *Castle v. Womble.* That would indicate that oil shale was subject to the same rigorous standards of profitability and commercial development as all other locatable minerals. However, as the extensive hearings make clear, Congress was fully aware that commercial development of oil shale was not yet technologically feasible. Despite this knowledge, expressions in Congress were all in the direction and belief that oil shale lands were of tremendous value and, as Congressman Taylor's remarks indicate, that valid oil shale claims did exist.

On May 10, 1920, shortly after the passage of the

Mineral Lands Leasing Act, the Department of Interior issued *Instructions* relating to oil shale placer claims. 47 L.D. 548 (hereinafter *Instructions*). These *Instructions* were in response to the first application for patent of 14 oil shale placer mining claims under the 1920 Act. The purpose was to provide guidelines as to what constituted a discovery of oil shale under the new law. The *Instructions* held that consistent with the Department's prior position, oil shale was a valuable and, therefore, locatable mineral:

> The Department has had numerous inquiries as to the locatability and patentability of such deposits under the mining laws and in response thereto, while disclaiming any intention to expressing a binding opinion in the premises, it has nevertheless declared itself as favorable to the view that such deposits, if valuable, are subject to location and purchase under the mining laws . . .
>
> Oil shale having been thus recognized by the Department and by Congress as a mineral deposit and a source of petroleum, and having been demonstrated elsewhere to be a material of economic importance, lands valuable on account thereof must be held to have been subject to valid location and appropriation under the placer mining laws, to the same extent and subject to the same provisions and conditions as if valuable on account of oil or gas.

Id. at 549-551. The *Instructions,* therefore, determined that oil shale was sufficiently valuable to be discoverable. Only questions such as the size and richness of the

deposits would appear to remain. That this is the correct interpretation of the *Instructions* is indicated by the fact that the 14 claims which occasioned the *Instructions* were granted patents.

The next Congressional action came in 1930-31, subsequent to the *Freeman* decision which reaffirmed the principle of the 1920 *Instructions* that oil shale was valuable for discovery purposes even though not presently profitable. The immediate cause of the Congressional review was the accusation by Ralph S. Kelly, Chief of the Field Division of the Department of Interior in Denver before his resignation in 1930, that the mining laws were being improperly administered with respect to oil shale. Among other things, he pointed to what he felt was a clearly erroneous decision in the *Freeman* case. 74 *Cong. Rec.* 7080-7083 (1931); *Hearings on S. Res. 379 Before the Senate Committee on Public Lands and Surveys,* 71st Cong. 3rd Sess. (1931); *Consolidated Hearings on H.R. 3754, H.R. 12802, H.R. 13191, H.R. 15002, H.R. 15130, H.R. 15131, and H.R. 15132 Before the House Committee on Public Lands,* 71st Cong., 2nd and 3rd Sess. (1931).

The discovery rule of *Freeman* was thoroughly explored by Congress. It was clearly understood that although commercial development of oil shale was not yet feasible, claimants were nevertheless receiving patents under *Freeman* based on oil shale's future value as a source of petroleum. *Hearings on S. Res. 379, supra* at 22-27. The hearings revealed that the *Instructions* and *Freeman* had already resulted in the patenting of 184,000 acres of oil shale lands, and that

an additional 85,000 acres could be disposed of through pending patent applications. *Consolidated Hearings on H.R. 3754, supra* at 181; *H.R. Rep. No. 2537,* 71st Cong., 3rd Sess., 4, 9 (1931); 74 *Cong. Rec.* 4100-4101, 4104 (1931).

Despite this thorough knowledge of the legal aspects and practical consequences of the *Freeman* doctrine, the oil shale legislation reported to the House did not modify the *Freeman* rule of discovery. *H.R. Rep. No. 2537, supra;* 74 *Cong. Rec.* 4102-4104 (1931). Furthermore, the Chairman of the Senate Committee on Public Lands, Senator Gerald P. Nye, wrote to Secretary of Interior Wilbur that patenting should continue. Exhibit C-699 in the Administrative Record. The failure of Congress even to propose legislation that would alter the requirements of discovery under *Freeman* manifests its approval of that rule.

The most recent significant Congressional action affecting the patenting of oil shale claims was the passage of the Act of July 20, 1956, 70 Stat. 592, 30 U.S.C. § 122. This Act facilitates the patenting of oil shale claims preserved under 30 U.S.C. § 193 by eliminating the requirement that the applicant must also obtain any outstanding patent to the surface rights. However, Congress did not specifically address the problem of discovery at all.

[5] In summary, a review of the legislative history and subsequent administrative and Congressional action under the Mineral Lands Leasing Act of 1920 indicates that Congress intended and did, in fact, ratify a liberalized version of the traditional rule of dis-

covery, as embodied in *Freeman*. Although it is difficult to discern the Congressional intent from the debates preceding the enactment of the Mineral Lands Leasing Act of 1920, the 1920 *Instructions,* promulgated only three months later, disclose that oil shale was regarded as sufficiently valuable to be a legally discoverable mineral despite the lack of prospects for immediate profitable development. This administrative ruling should be accorded considerable weight (especially in view of the otherwise ambiguous Congressional intent), since it is a contemporaneous construction by those who are presumably intimately familiar with the legislative history and who are charged with the enforcement of the act. *United States v. Leslie Salt Co.,* 350 U.S. 383, 396, 76 S.Ct. 416, 100 L.Ed. 441 (1956); *Norwegian Nitrogen Products Co. v. United States,* 288 U.S. 294, 315, 53 S.Ct. 350, 77 L.Ed. 796 (1933); *United States v. Shreveport Grain and Elevator Co.,* 287 U.S. 77, 84, 53 S.Ct. 42, 77 L.Ed. 175 (1932); *United States v. Philbrick,* 120 U.S. 52, 59, 7 S.Ct. 413, 30 L.Ed. 559 (1887); *Brennan v. Udall,* 379 F.2d 803, 806-807 (10th Cir. 1967), *cert. denied,* 389 U.S. 975, 88 S.Ct. 477, 19 L.Ed.2d 468.

As noted, in 1930-1931, a major investigation was conducted by Congress into the Department of Interior's patenting of oil shale lands, including an evaluation of the discovery rule of *Freeman* and the implications it held for further patenting of oil shale lands. The failure of Congress to modify or overrule the *Freeman* doctrine when presented with an opportunity to do so is a further indication of Congress' intent. *Corn*

Products Refining Co. v. Commissioner of Internal Revenue, 350 U.S. 46, 53, 76 S.Ct. 20, 100 L.Ed. 29 (1955); *United States v. Leslie Salt Co., supra* 350 U.S. at 397, 76 S.Ct. 416; *Norwegian Nitrogen Products Co. v. United States, supra* 288 U.S. at 313, 53 S.Ct. 350; *Kay v. FCC,* 143 U.S.App.D.C. 223, 443 F.2d 638, 646-647 (1970). As was contemplated by Congress, the Department of Interior resumed patenting oil shale lands under *Freeman.*

That Congress should take a special attitude toward oil shale lands and ratify in *Freeman* an exception to the traditional discovery rule is explained by the unusual role of oil shale as a natural resource in contrast to other locatable minerals. As the Congressional hearings and debates have disclosed, oil shale was perceived as highly valuable and crucial to the national security and welfare. Congress believed that commercial development of oil shale would soon be feasible, because of its perception of the rapid depletion of existing sources of oil. That attitude has persisted, in varying degrees, to this day. Consequently, various means have been sought to foster the development of oil shale. One such technique was to liberalize the rules of discovery.

[6, 7] This long, stormy, and somewhat complicated Congressional and administrative involvement in the disposal of oil shale lands demonstrates Congressional approval of the *Freeman* rule of discovery. Consequently, the Courts should respect and apply the approved rule, in the absence of Congressional action to the contrary. An attempt by the Board of Land Appeals or this Court to overrule *Freeman* would be viola-

tive of Congressional legislative authority, and therefore improper. *NLRB v. Bell Aerospace Co.*, 416 U.S. 267, 275, 94 S.Ct. 1757, 40 L.Ed.2d 134 (1974); *Fribourg Navigation Co., Inc., v. Commissioner of Internal Revenue*, 383 U.S. 272, 283, 86 S.Ct. 862, 15 L.Ed.2d 751 (1966); *Cammarano v. U. S.*, 358 U.S. 498, 511, 79 S.Ct. 524, 3 L.Ed.2d 462 (1959); *Service v. Dulles*, 354 U.S. 363, 380, 77 S.Ct. 1152, 1 L.Ed.2d 1403 (1957); *Corn Products Refining Co. v. Commissioner, supra; National Labor Relations Board v. Gullett Gin Co.*, 340 U.S. 361, 365-366, 71 S.Ct. 337, 95 L.Ed. 337 (1951); *Wilmette Park District v. Campbell*, 338 U.S. 411, 417-418, 70 S.Ct. 195, 94 L.Ed. 205 (1949); *Crane v. Commissioner*, 331 U.S. 1, 7-8, 67 S.Ct. 1047, 91 L.Ed. 1301 (1947); *Brooks v. Dewar*, 313 U.S. 354, 360-361, 61 S.Ct. 979, 85 L.Ed. 1399 (1941); *Helvering v. R. J. Reynolds Tobacco Co.*, 306 U.S. 110, 116, 59 S.Ct. 423, 83 L.Ed. 536 (1939); *Brennan v. Udall, supra* The "re-enactment rule" enunciated in these cases should not be used in the absence of clear evidence that Congress was aware of the administrative regulation at the time of its review of the rules of discovery. *Rothenberg v. U. S.*, 233 F.Supp. 864, 866-867 (D.Kan.1964), *aff'd.*, 350 F2d 319 (10th Cir 1965); *see also* Davis, *Administrative Law* § 5.07 (1958). Here, it is clear that Congress refused to modify the *Freeman* rule despite full knowledge of its existence and meaning.

V

[8] For years, top administrators in the Interior Department have recognized the energy potential of

oil shale. They themselves generated financial and other interest in its mining. Even if the Congressional treatment of the *Freeman* rule is considered merely as an interpretive aid, and not as hardening the *Freeman* rule into an act of law,[2] we hold that the Interior Department is estopped from challenging the validity of the pre-1920 oil shale claims involved in this case. "The doctrine of equitable estoppel binds the Government for the conduct of its agents while they are acting within the scope of their employment." *Atlantic Richfield Co. v. Hickel,* 432 F.2d 587, 591 (10th Cir. 1970). *See United States v. Wharton,* 514 F.2d 406, 412-413 (9th Cir. 1975); *Fox v. Morton,* 505 F.2d 254, 256 (9th Cir. 1974); *C. F. Lytle Co. v. Clark,* 491 F.2d 834, 838 (10th Cir. 1974); *Brandt v. Hickel,* 427 F.2d 53, 56-57 (9th Cir. 1970); *United States v. Georgia-Pacific Co.,* 421 F.2d 92 (9th Cir. 1970); *McKay v. Wahlenmaier,* 96 U.S.App.D.C. 313, 226 F.2d 35, 43 (1955); *Chapman v. El Paso Nat. Gas. Co,* 92 U.S. App.D.C. 154, 204 F.2d 46, 53-54 (1953); Davis, *Administrative Law of the Seventies,* § 17.01 (1976); Comment, "Emergence of an Equitable Doctrine of Estoppel Against the Government—The Oil Shale Cases," 46 Colo.L.Rev. 433 (1975); Berger, Estoppel Against the Government, 21 U.Chi.L.Rev. 680 (1954). Prudent investors detrimentally relied upon the deliberate actions and statements of high government authorities. Such government encouragement was clearly undertaken in an official capacity, and comports with the subsequent treatment of oil shale both by the Department of the Interior in its *Instructions* of 1920 and by

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[2] *See* Davis, *supra* at § 5.07.

Congress. This is a clear case for the application of equitable estoppel against the government.

A review of public announcements and events through the years will set the proper factual perspective for oil shale development and its potential in 1920. "Interest in the commercial development of oil shale has varied directly with the need for hydrocarbon fuels and inversely with . . . the availability of shale oil's chief competitor—conventional crude oil." Thomas A. Sladek, "Recent Trends in Oil Shale—Part 1: History, Nature, and Reserves," 17 *Mineral Industries Bulletin* 1, 3 (Nov. 1974). Until shortly after the discovery of oil at Titusville in 1859, the "U.S. shale oil industry . . . was a vital part of the American economy." *Id.*

For half a century thereafter, the oil shale industry lay dormant. At the beginning of the twentieth century, oil shale was regarded even by the speculator only as an indication of the existence of a nearby oil field:

> The tunnel stopped in shale, which is certainly what is known as oil shale, but nobody imagined that it contained oil . . . No tests have yet been made of the oil, but it is probable that a sample will be sent to some expert, and possibly the oil may be developed and piped down to the city before another year has passed.

"Oil Oozing from Breast of Cowenhoven Tunnel," *The Denver Times* at 11 (February 7, 1902).[3]

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[3] Local newspapers are an invaluable source for determining whether the "prudent person" prior to February 25, 1920 thought that an investment in oil shale deposits was mere speculation or was presently capable of being developed at a reasonable profit. The

> "an expert operator . . . says he has never seen better indications for the development of a first class field, the shale encountered even in croppings is so thoroughly impregnated with oil that it burns readily and the indications of gas are to be found everywhere."

"Oil in Rio Blanco," *Id.* at 6 (May 21, 1907). *See also,* "Irrigation Project," *Id.* at 6 (May 23, 1902); "Oil Excitement in Slate Creek District," *Id.* at 9 (Feb. 23, 1903).

However, during World War I, officials of the Federal government actively encouraged Westerners to invest in Colorado's oil shale deposits: "I plead with you, men and women of the West . . . Develop your vast resources on a sound business basis . . . Let every investor get a run for his money." Speech by Dr. David T. Day, Chief of the United States Division of Petroleum Research, United States Bureau of Mines, delivered to delegates from Colorado mining associations and the public in the chamber of the Colorado House of Representatives, "Colorado's Oil Shales to Save World—Day," *Id.* at 2 (Jan. 24, 1918). "The future of the oil industry is in the hands of the people of Colorado and Utah . . . If the people of those states do not take hold and develop their resources, Eastern people will come in and reap the benefits." Speech by

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impact upon the beliefs of prudent persons can be determined from informative statements in newspaper articles. We do not consider them for the truth of the facts therein asserted, but only for their impact on the prudent mining investor. Rules 201 and 902(6). Fed. R.Evid. permit us to take notice of statements in newspaper articles without the necessity of authentication.

Day to the Colorado Civic Association "Expert Tells of Shale Riches," *Id.* (June 26, 1918).

Both Dr. Day and Interior Secretary Lane emphasized the fact that Colorado's oil shale deposits would "save the world" when the oil fields were exhausted:

> It is but a question of years—and not many of them, at that—until the oil fields of the world will be exhausted to the point where gasoline and other products of crude oil must be secured from another source and—the rich oil shales of Colorado will be that source.

"Save the World," *supra.*

Investment in oil shale, which had been scorned by prudent persons at the turn of the century, gained the interest of the financial world:

> The financial world began to regard him [an early forecaster who preached that oil shale would save the world] as anything but 'cracked' on the subject . . . until today [when] people are giving serious attention to those treasure vaults that the world up to only yesterday said contained only debris instead of untold wealth.

"Colorado's Oil Shales to Save World," *supra.*

The following announcement by Secretary Lane of the Department of the Interior helped trigger the filing of thousands of claims prior to 1920:

> The most important single act during the month of December in connection with the classification of

> mineral lands was the creation of two Naval oil shale reserves, one of 45,440 acres in western Colorado, and one of 86,584 acres in northeastern Utah. The lands thus set apart for the use of the Navy contain bodies of shale which, when mined and distilled in properly constructed retorts, yield oil of good quality. Thus far oil has not been extracted from shale in the United States in commercial quantities since the discovery of crude oil developed by wells, because oil can be secured in the latter way much more cheaply than thru the more complex process of extracting it from shales. But the oil shale industry has existed in Scotland for half a century in spite of the competition of the oil fields of the world, and the time will doubtless come when the large oil shale deposits of western United States will also be developed in a commercial way.
>
> The Naval oil shale preserves have been created to provide for the needs of the Navy during that future time when the ordinary oil fields have been so reduced that it becomes practicable and profitable to distill the more expensive oil shale.

"Colorado Shale Reservations Are Held Important." *The Denver Post* at 1 (Jan. 21, 1917). In fact, the Federal government informed Colorado's interested citizenry that its oil shale could be mined at a substantial profit, and by a simple process:

> Based on figures from the Scotch and French shale operations, shale in Colorado and her sister states

> can be mined on a large scale and give the investor better than 50 percent profit. Shale to be mined at a profit should be in veins not less than three feet thick.

"Colorado's Oil Shales to Save World," *supra.*

> Fancy processes are not needed. Just tear a leaf out of the Scotch book. They have been making profiits out of shales since 1869, and their methods are good. The industry requires manufacturers and miners. This oil shale is very tough and not easy to mine, but Colorado people are past masters of mining and will solve all such problems . . . Dr. Day stated the government thought enough of the shale deposits to create a reserve of 145,000 acres in Colorado and Utah for the future use of the Navy, but that this reserve did not by any means include the richest shales, and there is enough left unreserved for all.

"Expert Tells of Shale Riches," *supra.*

Geologists reinforced the view of Federal officials that the oil shale deposits ought to be mined, and could be mined at a reasonable net profit. *See* "Possibilities of State's Shale Outlined By Professor George," *The Rocky Mountain News* at sec. one (Jan. 1, 1918); "Natural Oil Running Short, But State Shale Will Produce For 800 Years," *The Denver Times* at 8 (Jan. 1, 1920).

[9, 10] Thus, the Government stressed the fact that oil shale deposits would *inevitably* become commercially marketable. This inevitably removed the pre-1920

claims in existing oil shale deposits from the realm of mere speculation, and gave them sufficient present value to constitute a valuable mineral deposit pursuant to 30 U.S.C. § 22 *et seq.* While we agree with the Board that speculative future value is not a sufficient showing of present value to make oil shale a "valuable mineral," certain (or apparently certain) value in the near future is sufficient evidence of present value. In the Government's encouragement of early investment in oil shale, there was no suggestion that "dramatic technological breakthroughs" or unexpected "market changes" would be necessary in order to develop the oil shale deposits and make them profitable. The Board also stated that "in the 102 years since enactment of the general mining law, value has always been determined upon present facts, not upon possibilities of the future." *Winegar,* 16 IBLA at 168. This is incorrect in that the value of *oil shale* deposits has always been determined in accordance with its future potential.

Among those early prudent investors was Karl C. Schuyler, Sr., an authority on mining law, who became a United States Senator from Colorado in 1932. His partners included George A. Taff, an engineer who had been instrumental in the construction of the Pike's Peak hydroelectric plants, and Eugene D. Milliken, United States Senator from Colorado from 1941 to 1957. Reports made by mineral examiners of the General Land Office concluded that:

> Whether or not to lessee is successful in his attempt to solve the shale question, there is no question

> but that the attempt that he is making is made on a basis sufficiently large and is done under the direction of sufficiently competent technical men to insure the belief that the men who are financing the attempt have every confidence in its success.
>
> Mention is made of these last facts to make clear the fact that in our opinion, the entire system of development work on which the applicant relies for patent, when viewed in connection with the present operations of the lessee, establishes beyond any doubt the bona fides of the work.

General Land Office Field Examiners, *Mineral Report* at p. 16 (Nov. 9, 1920). The fact that these early prudent investors were persons of prudence and mining experience who reasonably believed that a valuable mine could be developed is persuasive authority to satisfy the "valuable mineral" test, even under *Castle v. Womble, supra,* and *United States v. Coleman, supra.*

The excitement of thousands of investors who staked claims in oil shale deposits prior to passage of the Mineral Leasing Act of 1920 was fueled by a combination of factors:

> the supply of crude oil from domestic fields fell below demand, and increasing amounts of crude were imported from the new fields in Mexico. The U. S. Geological survey [sic] estimated that a nine-year supply of domestic natural petroleum remained in the United States. No additional discoveries were anticipated, and it appeared that the automobile, which was already a major element in

> American life, would soon fall idle for lack of fuel. At about the same time, the USGS announced that fantastic quantities of potential fuels were contained in the western oil shales. When combined with the predictions of a coming fuel shortage, this announcement produced an oil shale boon.

Sladek, *supra* at 3.

Interest in oil shale was dampered in the 1920's as a result of (a) lack of technology, because the industry had stagnated for a half-century, (b) widespread promotional fraud, which weakened public confidence in the industry, and (c) the discovery of abundant oil reserves in Texas, which was the single most significant factor that diminished interest in oil shale. *Id.*

During World War II, the United States became more dependent on imported oil. In response to this need, Congress passed the Synthetic Fuels Act of 1944 "which acknowledged the importance of a reliable domestic supply of fuels and which provided the Bureau of Mines with a charter to establish such a supply from the domestic oil shale deposits. The Bureau began a research program that has continued to the present day." *Id.*

Once again, the discovery of oil in the Middle East, on the continental shelf of the United States, and in Alaska, crushed public interest in oil shale until the "energy crisis" of 1973. *Id.*

In the aftermath of the fuel embargo, public interest in oil shale and in other energy alternatives has remained high. Even today, when the Alaskan pipeline is nearly completed, reports on oil shale and synthetic

fuels are given significant treatment by the press. *See, e. g.,* "Oil-Shale Funds Blocked," *The Denver Post* 1 (Sept. 23, 1976); "Interior Predicts Competitive Shale," *The Rocky Mountain News* 27 (Sept. 13, 1976); "Colorado: Tomorrow, the West," *The Denver Post* (Sept. 5, 1976); "Is Oil Shale Dead?," *The Straight Creek Journal* 6 (Sept. 2, 1976); "Kleppe 'Stumped' On Oil Shale," *The Denver Post* (Aug. 30, 1976); "Oil-Shale Loan Plan Back," *Id.* (Aug. 29, 1976); "Dead Oil Shale Project Revived," *Id.* at p. 1 (Dec. 1, 1976).

In November 1974, the Federal Energy Administration published its Final Task Force Report, *Project Independence: Potential Future Role of Oil Shale: Prospects and Constraints.* The FEA noted that estimates of oil shale resources have greatly increased since the 1920's, and that Colorado has 84% of the higher grade reserves, which are among the finest and most easily mined in the world. *Id.* at 1. The Federal government owns 80% of the known resources, although there were thousands of claims filed on this public land prior to 1920, "when oil shale was a locatable mineral under the mining laws." *Id.* at 96. The Report urges that the Government lease or sell its land to private industry at a fair market value and in a manner that would achieve efficient resource allocation by approximating a perfectly competitive market. Because the Government has refused to lease or sell its land, which contains the most valuable oil shale resources, private enterprises are unwilling to develop their privately held deposits. *Id.* at 101-102:

> a private developer will continue to be reluctant to develop private lands first so long as the possibility exists that at some future date, as a result of leasing public lands, the high grade resources would be available to potential competitors as well as whatever information the pioneering company had already developed. The situation has been assessed by the National Petroleum Council which has concluded that without the availability of public lands, development may be limited to one or possibly two plants with a combined production of 100,000 barrels per day by 1985, even though the potential is probably closer to 400,000 daily barrels. *Id.* at 102.

Even the upwardly revised cost estimates of shale oil production ($12 to $18 per barrel) indicate that shale oil could be presently competitive with oil imported from OPEC, especially if world oil prices rise. Report of the Department of the Interior, *Mining and Minerals Policy* 72 (July 1976). This report notes that the time required to determine the validity of claims filed on public lands when oil shale was a locatable mineral may impede commercial development. *Id.* at 73. *See Project Independence, supra* at 39. The Secretary of the Interior urged that a synthetic fuel commercialization bill be passed by Congress in 1976, in order to "encourage the development of the industry and provide an incentive for accelerated leasing and production of shale oil," *Id.*

At about the same time, the GAO released a report to Congress entitled, *An Evaluation of Proposed Federal*

Assistance for Financing Commercialization of Emerging Energy Technologies (Aug. 1976), wherein it recommended that the synthetic fuel commercialization bill not be passed:

> Synthetic fuels production—while technically feasible with first generation technologies—is not cost effective in that the total cost of outputs is not price competitive with foreign oil. Nor does it look as attractive when compared to other technologies, which we examined, on an incremental price basis. We believe synthetic fuels technologies would receive a high priority for Government research, development and demonstration efforts designed to develop more advanced and efficient production technologies, but we question whether assistance should be given to commercialization of synthetic fuels at the present time.

Id. at 48.

Faced with these polarized positions, on September 23, 1976, the House of Representatives defeated a proposed $4 billion loan guarantee as an incentive to produce synthetic fuel by a one-vote margin. Multiple economic, aesthetic, environmental, engineering, and political uncertainties throughout the field of energy resource development have led to this intense divisiveness within the federal government itself. Yet, the nation requires a stable, long-term policy regarding the development of oil shale deposits. Such a coherent energy resource policy is especially important today, when we have become much more reliant than before

the "energy crisis" of 1973 upon foreign oil, when the future of nuclear energy remains unclear, and when other energy alternatives are technologically and economically more unrealistic than oil shale.

> Reliance on imported energy requires acceptance of a worsening of the balance of payments. In addition to the bleak monetary picture, a certain insecurity is inevitable when the operation of the nation depends to a large extent on a steady supply of fuel from an area of the world which has been in an almost continuous state of war for over 25 years.
>
> In the long run, the United States and its neighbors will need many other sources of energy besides petroleum, and oil from the abundant reserves of oil shale will probably be one of the alternative sources. There is certainly much current interest and involvement in the oil shale business. However, at the present time oil shale is at the mercy of many political and economic elements, and it is uncertain that the current efforts will be of sufficient duration to produce a mature shale oil industry.

Sladek, *supra,* at 3-4; *See* Hon. Wayne N. Aspinall "Oil Shale Development Handicapped by Government Indecision," 59 Quarterly of the Colorado School of Mines 91 (July 1964).

Because of the instability of the Government's energy policy, it has appeared prudent, at times, to invest in oil shale, while at other times, such investment has appeared merely speculative. While the courts cannot prevent the Government from having an unstable

energy policy, the courts must prevent the Government from altering legal standards that have been relied upon by investors for the past half-century.

Since World War I, prudent mining investors and industrial giants have purchased oil shale land in the reasonable expectation that future profits would justify such purchases. *See Winegar, supra* at 134-138. The Standard Oil Company of California began to purchase Colorado land bearing oil shale in 1943 "for their oil shale resources," which Standard considered valuable. (Deposition of W. S. Svenson at 28). Since 1927, Texaco has acquired nearly 30,000 acres of oil shale land in Colorado and Utah in the belief that such an acquisition has been prudent. (Deposition of C. E. Moser at 47). Since 1955, Mobile Oil Co. has acquired about 20,000 acres of oil shale land, and holds an option to purchase about 12,000 other acres "in the expectation of eventually returning a profit justifying the purchase" (deposition of T. W. Nelson at 40). Since 1952, Cities Service has acquired about 10,000 acres of Colorado oil shale land, and considers that investment to have been prudent (deposition of D. M. Anthony at 30-32). Since 1961, TOSCO has acquired about 30,000 acres of oil shale land in Colorado and Utah, and regards this as a prudent investment: "a viable industry cannot exist without the ownership of these reserves" (testimony of H. Koolsbergen, Tr. 5033).

Apart from the fact that the Board's reversal of the *Freeman* standard has ignored a century of reliance on the prudent man standard as it applies to the peculiar situation of oil shale, such action could jeopardize

the future of our nation. It is apparent that world crude oil prices can only continue to rise. With constantly depleting oil reserves, there must come a time when the recovery of oil from shale will be competitive with crude oil. At this critical juncture, the future of oil shale investment ought not to be tied up in decades of litigation. As with every other industry, the technology would improve during competitive private development. Prudent investors might be those who recognize that we cannot wait until the next severe shortage of crude oil (which may be the final shortage). In our view, *United States v. Coleman, supra,* did not superimpose the requirement that shale oil be presently competitive with crude oil. Prudent investors can foresee a time in the not-too-distant future when it will be cheaper to supply more of this country's energy needs with the vastly greater amount of shale oil.

VI

The Tenth Circuit and this Court have recently considered the applicability of the "prudent man" test in the area of mining claims. *United States v. Zweifel,* 508 F.2d 1150, 1157 (10th Cir. 1975); *Hallenbeck v. Kleppe,* No. 75-786 (D.Colo., Aug. 31, 1976).

> The government must go forward with sufficient evidence to establish prima facie the invalidity of contested claims, and the burden then shifts to the claimant to show by a preponderance of the evidence that his claim is valid

Zweifel, supra at 1157; *Hallenbeck, supra* at 7.

[11-13] In view of the Federal Government's own

statements which encouraged prudent investors to stake claims in oil shale deposits, we find that the Government has not established a prima facie case of invalidity. We do not hold that an administrative agency cannot overrule its own long-standing precedents. However, because of subsequent Congressional approval, the *Freeman* standard can only be overruled by legislative action. Even if we were to hold that the Board itself could overrule *Freeman,* and that it could determine that oil shale can no longer be regarded as a valuable mineral under the prudent investor test, the Government cannot assert that the very oil shale claims it had encouraged are not valid. The reversal of the original intention of the Interior Department and of Congress requires application of estoppel against the Government. *See Vassiliou v. District Director of Immigration & Nat. Serv.,* 461 F.2d 1193, 1195 (10th Cir. 1972). Moreover, where an established rule has long been relied upon by investors, an administrative agency should not reverse its position on a retroactive basis. See *NLRB v. Majestic Weaving Co.,* 355 F.2d 854, 859-861 (2d Cir. 1966) (Judge Friendly). We hold that the six pre-1920 oil shale claims were discoveries of valuable mineral deposits and are valid claims.

VII

Accordingly, IT IS HEREBY ORDERED that Plaintiffs' Motion for Summary Judgment is GRANTED. Defendant's Motion for Summary Judgment is DENIED.

IT IS FURTHER ORDERED that by February 1,

1977, Plaintiffs are to submit an Order and Form of Judgment setting forth their claims with particularity and description and implementing the Court's ruling herein.

APPENDIX D

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO

SHELL OIL COMPANY AND D. A. SHALE, INC., *Plaintiffs,* vs. CECIL D. ANDRUS, Secretary of the Interior, *Defendant.*	Civil Action No. 74-F-739 JUDGMENT

[Filed Feb. 1, 1977, James R. Manspeaker, *Clerk*]

This action having come before the Court on cross motions for summary judgment and the issues having been duly considered and a decision having been duly rendered,

IT IS ORDERED AND ADJUDGED that Judgment enter for Plaintiffs, Shell Oil Company and D. A. Shale, Inc., and against Defendant, Cecil D. Andrus, Secretary of the Interior, as follows:

1. The decision of the Board of Land Appeals in the Department of the Interior in *United States v. Frank W. Winegar, et al.,* IBLA 70-549, June 28, 1974, reported at 16 IBLA 112, 81 I.D. 370, is reversed.

The oil shale mining claims owned by the respective plaintiffs and involved in this action and their legal descriptions, as set forth in the location certificates, are as follows:

Shell Oil Company Claims	*Legal Descriptions*
Mountain Boy 6	Section 14, northwest quarter
Mountain Boy 7	Section 14, southwest quarter
D. A. Shale, Inc. Claims	
Harold Shoup 1	Section 23, southeast quarter
Harold Shoup 2	Section 23, northeast quarter
Harold Shoup 3	Section 23, NE 1/4 NW 1/4, E 1/2 SW 1/4 NW 1/4, and SE 1/4 NW 1/4
Harold Shoup 4	Section 23, southwest quarter,

all within Township 7 South, Range 97 West, 6th Principal Meridian, in Garfield County, Colorado.

2. The applications to patent plaintiffs' claims are remanded to the Department of the Interior. The defendant and his subordinates shall expeditiously process those applications consistent with the Order granting summary judgment. Absent good cause shown, such processing shall be based on the existing administrative record.

3. The Court retains jurisdiction for the purpose of entry of such further orders and directions as may be necessary or appropriate for the construction or carrying out of this judgment or this Court's Order of January 17, 1977, granting summary judgment for plaintiffs in this action.

4. Each party to pay its own costs.

Dated at Denver, Colorado, this 10th day of February, 1977.

FOR THE COURT:

JAMES R. MANSPEAKER, *Clerk*
By: Stephen P. Ehrlich
STEPHEN P. EHRLICH,
Chief Deputy

Approved:
Sherman G. Finesilver
SHERMAN G. FINESILVER,
United States District Judge

APPENDIX E

UNITED STATES DEPARTMENT OF THE INTERIOR
OFFICE OF HEARINGS AND APPEALS
INTERIOR BOARD OF LAND APPEALS
4015 Wilson Boulevard
Arlington, Virginia 22203

UNITED STATES
v.
FRANK W. WINEGAR, et al.

IBLA 70-549 Decided June 28, 1974

Appeal from a decision of Administrative Law Judge Dent D. Dalby, holding that five and a portion of a sixth oil shale placer mining claims are valid and can proceed to patent. (Colorado Contest 359, 360)

Reversed.

Mining Claims: Determination of Validity—Mining Claims: Discovery: Marketability

To satisfy the requirement of discovery of a valuable mineral deposit within the boundaries of an oil shale placer claim located prior to February 25, 1920, it must appear that at that time the mineral deposit could have been developed, extracted, and marketed at a reasonable profit; it must also appear that such marketability has continued without substantial interruption from that time to the time of the contest proceedings. Where it has been shown that at no time would a

prudent man have expended further labor or means in order to develop actual mining operations, discovery of a valuable mineral deposit has not been made, and the claims must be declared null and void.

Mining Claims: Determination of Validity—Mining Claims: Discovery: Marketability

In order for an oil shale deposit to be considered valuable within the meaning of the general mining law, it must appear as a present fact, as of February 25, 1920, and at all times thereafter that the deposit could be developed, extracted, and marketed at a reasonable profit. The possibility of dramatic technological breakthroughs or changes in market conditions at some future date has no bearing on value as a present fact.

Mining Claims: Determination of Validity— Mining Claims: Discovery—Rules of Practice: Evidence

What men have or have not done over a period of years is proper evidence as to the conduct of a prudent man in the same or very nearly the same circumstances. Where oil shale claims had been held for fifty years and no commercial production was achieved on such claims, it must be concluded that no prudent man would have been justified in the belief that the mineral deposit could be developed, extracted, and marketed at a reasonable profit.

Rules of Practice: Generally

Departmental precedent will be overruled where it is shown: 1) that it is contrary to the law as interpreted by the courts and this Department, and 2) it would result in the disposition of public lands to those not entitled to receive them. *Freeman* v. *Summers,* 52 L.D. 201 (1927), is overruled.

APPEARANCES: Albert V. Witham, Esq., Office of the Regional Solicitor, Department of the Interior, Denver, Colorado, for appellant; Tweedy & Mosley, Denver, Colorado, and Clearly, Gottlieb, Steen & Hamilton, New York, New York, attorneys for appellees, Frank W. Winegar and Shell Oil Co.; Senior and Senior, Salt Lake City, Utah, attorneys for appellee, D. A. Shale, Inc.

OPINION BY CHIEF ADMINISTRATIVE JUDGE FRISHBERG

The United States appeals from that part of the decision by Administrative Law Judge (formerly Hearing Examiner) Dent D. Dalby dated April 17, 1970, validating placer mining claims Mountain Boy Nos. 6 and 7, and Harold Shoup Nos. 1, 2, 3 and 4.[1] The basic

[1] There were nine claims involved in the proceedings below: the Mountain Boy Nos. 1, 6, and 7, and K.C. Schuyler Nos. 2 and 3, and the Harold Shoup Nos. 1, 2, 3, and 4. The Mountain Boy No. 1, and the K. C. Schuyler Nos. 2 and 3 were declared invalid by Judge Dalby for lack of a physical finding of oil shale on the claims prior to February 25, 1920. Additionally, Judge Dalby found that 35.4 acres of the Harold Shoup No. 3 were non-mineral in character. That portion of the decision is final since no appeal was taken as to those claims.

issue presented in this appeal is whether the oil shale on the subject claims was a valuable mineral deposit as of February 25, 1920, when oil shale was withdrawn from location under the general mining law by the Mineral Leasing Act of February 25, 1920, 30 U.S.C. § 181 *et seq.* (1970), and, if so, whether such oil shale has continued to be a valuable mineral deposit within the meaning of the general mineral law, 30 U.S.C. § 22 *et seq.* (1970).[2]

The Mountain Boy Nos. 6 and 7 were surveyed in 1917 in 160-acre legal subdivisions. The location certificates were recorded February 6, 1918, showing location on January 8, 1918, by the same eight locators for both of the claims. Between 1917 and the early 1950's ownership of the claims changed several times. In 1956 Frank Winegar made an agreement with Shell Oil Company that he would attempt to purchase the Mountain Boy claims and use due diligence to obtain patents thereto for Shell. Shell agreed to buy the claims after patenting for $60 per acre and to reimburse Winegar's expenses up to $12,800.00. Winegar obtained title to a number of Mountain Boy claims, including Nos. 6 and 7. On August 7, 1958, he filed a patent application with the Bureau of Land Management for Mountain Boy Nos. 1-8. In a report of December 14, 1959, a Bureau

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[2] Section 37 of the Act, 30 U.S.C. § 193, also excepted claims on which a discovery had not been made by February 25, 1920, but on which work leading to a discovery was being diligently prosecuted on that date and was thereafter continued to a discovery. *See Starks* v. *Mackey*, 60 I.D. 309, 310 (1949). No party asserts that the claims in issue fall within this exception. Therefore, this exception will not be restated in further discussion below.

evaluation engineer recommended that patents be issued for the Mountain Boy Nos. 1, 6 and 7. A final certificate was issued by the Bureau of Land Management on November 30, 1960, for such claims. On March 21, 1961, the final certificate was approved for patent by a Minerals Adjudicator of the Bureau. The application was sent to the Director of the Bureau of Land Management for issuance of patent. A patent was not issued. Instead, some three and one-half years later, Colorado Contest 359 was initiated. Subsequently, Shell purchased the Mountain Boy Nos. 1, 6 and 7 from Winegar in November 1964 for $30,000.

The Harold Shoup Nos. 1, 2, 3 and 4 were located on September 29, 1917, by eight co-locators. The location certificates were recorded by October 27, 1917. S. D. Crump acquired such claims and quitclaimed them to Karl C. Schuyler, Sr., on May 24, 1923. When Schuyler died testate on July 31, 1933, the claims passed to his wife. On July 6, 1960, she incorporated D. A. Shale, Inc., under the laws of the State of Colorado, and transferred possessory title of the claims to such corporation. On September 29, 1960, the corporation filed an application for patent of these and other claims.

The instant case arose on September 8, 1964, when the Manager, Colorado Land Office, Bureau of Land Management, issued two complaints on behalf of the United States alleging the invalidity, *inter alia,* of the claims herein and requesting that they be declared null and void. Both complaints charged that:

A. Valuable minerals were not found within the lim-

its of the Claims on or before February 25, 1920, or subsequent to February 25, 1920, as a result of diligent prosecution of work leading to a discovery on February 25, 1920, and thereafter continued so as to constitute a valid discovery within the meaning of the mining law.

B. If a valid discovery was made on or before February 25, 1920, or subsequent to February 25, 1920, as a result of diligent prosecution of work leading to a discovery on February 25, 1920, and thereafter continued, the discovery was subsequently lost and the lands within the claims reverted to and became a part of the vacant unappropriated public domain.

C. Valuable minerals do not now exist within the limits of the claims so as to constitute a valid discovery within the meaning of the mining law.

On October 7, 1964, contestee D. A. Shale, Inc., filed an answer to the complaint denying the allegations. On November 9, 1964, contestee Frank W. Winegar, having obtained an extension of time in which to respond, filed an answer similarly controverting the allegations. At the same time Shell Oil Company filed a motion to intervene, alleging that it had purchased the Mountain Boy claims from Winegar. This motion was granted on November 9, 1964.

On March 9, 1967, leave was granted to the contestee to amend their answers to the complaints. The two cases were joined for hearing and decision. The hearing on the complaints was commenced on June 20, 1967,

at Denver, Colorado, and continued until October 13, 1967. A further hearing was held on November 20, 1967, at Salt Lake City, Utah.

After these adjudicatory proceedings Judge Dalby made an extensive review of the applicable mining law with respect to the evidence presented in the proceedings and concluded:

> If this were a case of first impression I would, for the foregoing reasons, find that * * * oil shale was not a valuable mineral deposit. (Dec. at 55).

However, because of prior departmental precedent, particularly *Freeman v. Summers,* 52 L.D. 201 (1927), Judge Dalby felt that he was precluded from entering such a finding; accordingly he held that five claims and a portion of a sixth were valid.

Appellant contends that there is no basis in fact or law for that holding and that prior departmental precedent with respect to oil shale is in error and should be overruled. Appellees argue that prior departmental precedent is a correct statement of both fact and law, but even if that precedent is to be overruled, such action may only be given prospective effect.

I. The Mining Law

The general mining law provides in pertinent part that

> all *valuable* mineral deposits in lands belonging to the United States * * * shall be free and open to exploration and purchase * * *. Act of May 10, 1872, *as amended,* 30 U.S.C. § 22 (1970). (Emphasis added).

From 1872 to 1920 oil shale was locatable under the general mining law. However, the Mineral Leasing Act of February 25, 1920, withdrew oil shale from disposition under the mining law, except as provided in Section 37 thereof, 30 U.S.C. § 193.

Since enactment of the general mining law, the courts and the Department of the Interior have consistently held that a valuable mineral deposit has been discovered where there have been found within the limits of a claim minerals of such quantity and quality that a prudent man would be justified in the expenditure of his labor and means with a reasonable prospect of success in developing a valuable mine. *United States v. Coleman,* 390 U.S. 599, 602 (1968); *Cameron v. United States,* 252 U.S. 450, 460 (1920); *United States v. Iron Silver Mining Co.,* 128 U.S. 673, 675 (1888); *United States v. Zweifel,* 11 IBLA 53, 80 I.D. 323, 328-29 (1973); *Oregon Basin Oil and Gas Co. (On Rehearing),* 50 L.D. 253, 254 (1924); *Castle v. Womble,* 19 L.D. 455, 457 (1894).

Although both appellant and appellees agree with that general statement of the law, appellant contends that the facts of this case mandate the conclusion that oil shale is not now and was not in 1920 a valuable mineral deposit, while appellees assert the opposite.

The clear purpose of the law has always been to obtain the development of actual mining operations. Several years after enactment of the general mining law the Supreme Court stated:

> It is the policy of the government to favor the development of mines of gold and silver and other

> metals, and every facility is afforded for that purpose * * *.
> *United States v. Iron Silver Mining Co.*, 128 U.S. 673, 675 (1888).

Eighty years later the Court adhered to the same view:

> Under the mining laws Congress has made public lands available to people for the purpose of mining valuable mineral deposits and not for other purposes.
> *United States v. Coleman*, 390 U.S. 599, 602 (1968).

Decisions of this Department are in accord with that reasoning. We have stated several times that actual mining operations are the best evidence that a mineral deposit is valuable. *See, e.g., United States v. Kosanke Sand Corp. (On Reconsideration)*, 12 IBLA 282, 304; 80 I.D. 538, 549 (1973); *United States v. McKenzie*, 4 IBLA 97, 100 (1971). It is where actual mining operations have not been initiated that the difficulty arises in determining whether a mineral deposit is valuable. While proof of actual sales of minerals from a claim is not an indispensable element in establishing their marketability, lack of development and sales may raise a presumption that the market value of the minerals found thereon was not sufficient to justify the cost of their extraction. *Barrows v. Hickel*, 447 F.2d 80 (9th Cir. 1971); *Palmer v. Dredge Corp.*, 398 F.2d 791 (9th Cir. 1968), *cert. denied*, 393 U.S. 1066 (1969); *United States v. Humboldt Placer Mining Co.*, 8 IBLA 407 (1972). Although such a presumption

can be overcome by evidence showing that a mineral deposit could have been extracted, removed and marketed at a profit on or prior to a given date, such findings have been rare. *Cf. Verrue v. United States,* 457 F.2d 1202 (9th Cir. 1972), *rev'g United States v. Verrue,* 75 I.D. 300 (1968); *United States v. Gibbs,* 13 IBLA 382 (1973); *United States v. Harenberg,* 9 IBLA 77 (1973), with cases cited above.

The Department of the Interior's seminal decision in determining whether there has been a discovery of a valuable mineral deposit is *Castle v. Womble, supra.* In that case an agricultural entryman had applied for a patent. Several mining claimants protested on the basis that they had discovered a valuable mineral deposit. In resolving the dispute, the Department tied the test of value to the concept of an operating mine as the desired end of the general mining law:

> [W]here minerals have been found and the evidence is of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine, the requirements of the statute have been met.
>
> 19 L.D. at 457.

This formulation, often referred to as "the prudent man test," has received the continuing approval of the courts. *Chrisman v. Miller,* 197 U.S. 313, 322 (1905); *Cameron v. United States, supra; United States v. Coleman, supra.*

In the years since promulgation of the prudent man test, the Department has found it necessary to state explicitly that for a mineral deposit to be considered valuable it must be capable of extraction, removal and marketing at a profit. This test of marketability has been approved by the Supreme Court in *United States v. Coleman, supra,* as a logical complement to the prudent man test:

> Minerals which no prudent man will extract because there is no demand for them at a price higher than the cost of extraction and transportation are hardly economically valuable. Thus, profitability is an important consideration in applying the prudent-man test, and the marketability test which the Secretary has used here merely recognizes this fact.

The ruling in *Coleman,* approving the marketability test employed by the Department, is and has always been applicable to all mining claims. *Converse v. Udall,* 399 F.2d 616 (9th Cir. 1968), *cert. denied,* 393 U.S. 1025 (1969), and cases cited therein at pp. 621-22.

The courts clearly defined value with respect to the purpose of the general mining law: the development of actual mining operations. It is equally clear that the level of anticipated profits must be sufficient to attract prudent investment capital to develop actual mining operations. For that reason we have held on several occasions that mineral deposits which will yield only meager profits are not valuable within the meaning of the general mining law, since no prudent man would invest in actual operations in those circumstances. *E.g.,*

United States v. Edwards, 9 IBLA 197, 203 (1973); *United States v. Harper,* 8 IBLA 357, 369 (1972).

In addition to the prudent man test and its logical complement, the marketability test,[3] the Department has developed several standards to aid in the determination of value.

First, it must appear as a *present* fact that there would be a reasonable prospect of success in developing an operating mine that would yield a reasonable profit. *Castle v. Womble, supra; Davis's Adm'r. v. Weibbold,* 139 U.S. 507, 523 (1891). Speculation with respect to future changes in market conditions, dramatic breakthroughs in technology, or the hoped-for discovery of a mother lode will not demonstrate as a *present* fact that a prudent man would be justified in initiating actual mining operations. *Foster v. Seaton,* 271 F.2d 836, 838 (D.C. Cir. 1959); *United States v. Denison,* 76 I.D. 233, 239 (1969); *United States v. Jenkins,* 75 I.D. 312, 318 (1968); *United States v. Larsen,* 9 IBLA 247, 266 (1973).

The *Castle v. Womble* decision, as already noted, issued as a result of proceedings between an agricultural entryman and mineral claimants; this was the typical situation in which the mining law developed.[4] It would

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[3] For an incisive and more extensive analysis of the application of the marketability test, *see United States* v. *Larsen,* 9 IBLA 247 (1973).

[4] There were other similar situations which give emphasis to the requirement that the property be valuable for mining as a present fact: 1) disputes between two mining claimants for the same area, where prior in time of discovery was prior in right; *Clipper Mining Co.* v. *Eli Mining & Land Co.,* 194 U.S. 220 (1904); and 2) disputes

have been inequitable to allow the defeat of a homestead entry by those asserting that the lands might someday be valuable for mining without demonstrating present value.

In addition to the historical concern for equity between competing claimants, there is a more fundamental reason for continued adherence to the present value requirement: there is no practical alternative. Lands may not pass from the public domain under the general mining law unless the Department is persuaded that they are valuable for mining. *United States v. Coleman, supra.* If marketability could be predicated upon possibilities of the future, the variables introduced would be endless. Since few, if any, of these variables are susceptible to reasonable predictability, the marketability test would be reduced to mere speculation, and any meaningful conclusion as to value would disappear in a sea of conjecture. The effects of permitting such vagueness in the administration of the law were accurately forecast by Judge Friendly in his lectures on administrative law: 1) capriciousness and 2) undue political influence.[5]

A second standard is that actions of others in the same or very nearly the same circumstances may be used as evidence of what would constitute prudent investment activity. For example, a mining claimant would be justified in initiating actual mining opera-

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over whether a placer claim was known to contain a mineral deposit at the time patent was issued. *United States* v. *Iron Silver Mining Co.*, 128 U.S. 673 (1888).

[5] H. FRIENDLY, THE FEDERAL ADMINISTRATIVE AGENCIES 19-24 (1962).

tions on mineral showings that are the same or very nearly the same as those where actual mining operations have been successfully brought to fruition by others. *See, e.g., Cascaden v. Bortolis,* 162 F. 267, 270 (9th Cir. 1908).

In the same manner, failure to undertake actual operations may be used as evidence that no prudent man would be justified in so doing. For instance, if mining claimants have held claims for several years and have attempted little or no development of actual operations, a presumption may be raised that there has been no discovery of a valuable mineral deposit. This was the case in *Cameron v. United States, supra,* where six years had elapsed from the date of location to the date of the hearing. There the Supreme Court stated:

> Sufficient time has elapsed since these claims were located for a fair demonstration of their mineral possibilities.
>
> 252 U.S. at 457.

For similar holdings, *see United States v. Ruddock,* 52 I.D. 313 (1927), where 17 years had elapsed without production; *Starks v. Mackey,* 60 I.D. 309 (1949), 29 years; *United States v. White,* 72 I.D. 522 (1965), 38-39 years; and *United States v. Flurry,* A-30887 (March 5, 1968), where the Department stated:

> * * * the most persuasive evidence as to what a man of ordinary prudence would do with a particular mining claim is what men have, in fact, done or are doing, not what a witness is willing to state that a prudent man would do.

A third standard is that money expended on further exploration or further research, but not on initiation of actual operations, is evidence only that further exploration or research may be justified; it is *not* evidence that the mineral exposed is valuable, or that prudent men would be justified in initiating actual operations. *United States v. New Mexico Mines, Inc.*, 3 IBLA 101, 106 (1971).[6]

As previously noted, oil shale was withdrawn from location under the general mining law by the Mining Leasing Act of February 25, 1920, 30 U.S.C. §§ 181, 193, 241 (1970). The mining claims which are the subject of the present appeal were located prior to the date of such withdrawal. Therefore, the validity of such claims must be tested by the value of the mineral deposit as of the date of the withdrawal, as well as at the date of determination. *Barrows v. Hickel, supra; Mulkern v. Hammitt*, 326 F.2d 896 (9th Cir. 1964). If the claims were not supported by a qualifying discovery of a valuable mineral deposit at the time of withdrawal, the land embraced within the boundaries of the claims would not have been excepted from the effect of the withdrawal, and the claims could not thereafter become valid even though the value of the deposit subsequently increased due to a change in the market value of the mineral. *United States v. Henry*, 10 IBLA 195, 199 (1973); *United States v. Gunsight Mining Co.*, note 6, *supra; United States v. Pulliam*, 1 IBLA 143 (1970); *United States v. Duval*, 1 IBLA 103 (1970).

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[6] For an imaginative analogy, *see United States* v. *Gunsight Mining Co.*, 5 IBLA 62, 69 (1972).

Even if the mining claims are supported by a valid discovery, it is clear that a discovery may be lost. We have frequently held that discovery may be "lost" due to exhaustion of the deposit or to changes in market conditions of substantial duration. *Best v. Humboldt Placer Mining Co.*, 371 U.S. 334, 336 (1963), *citing with approval United States v. Logomarcini*, 60 I.D. 371, 373 (1949), and *United States v. Houston*, 66 I.D. 161, 165 (1959). *See also Mulkern v. Hammitt, supra; Adams v. United States*, 318 F.2d 861, 871 (9th Cir. 1963); *Multiple Use Inc. v. Morton*, 353 F. Supp. 184 (D. Ariz. 1972), *aff'g United States v. Silverton Mining and Milling Co.*, 1 IBLA 15, 18 (1970); *United States v. Charleston Stone Products, Inc.*, 9 IBLA 94, 100 (1973); *United States v. Denison, supra.*

II. The Distribution and Development of Oil Shale

The geographic distribution and the history of the development of both foreign and domestic oil shale were very ably set forth in the opinion rendered by Judge Dalby. Accordingly, we adopt those portions of his decision which are set forth below, changing the numbers of the footnotes therein to follow ours sequentially.

"BACKGROUND

"Geographic Distribution of Oil Shale

"The contested claims were located for oil shale. Oil shale is a fine-grained, laminated, sedimentary rock containing solid organic material called kerogen which, upon destructive distillation, will produce a substantial

amount of oil. The kerogen is derived from deposition of aquatic plants and smaller amounts of animal life in lakes during various geological periods. Oil shale does not contain appreciable amounts of oil.

"Oil shale was deposited in a wide span of the earth's geological history from the Cambrian to recent periods. Shale deposits that yield at least 10 gallons of oil per ton occur in all of the continents. There are both high and low grade oil shale deposits in Africa of late Paleozoic and early Mesozoic age. In the Stanley Basin of the Congo, extensive deposits of oil shale of Triassic age exist in beds that aggregate about 30 feet in thickness and yield more than 25 gallons of oil per ton. There are extensive deposits in China, Israel, Jordan, Syria, Siberia, Thailand, Burma and Turkey. The oil shale resources of Asia have been estimated at 70 billion barrels in deposits that yield more than 25 gallons per ton. Deposits occur in Australia and New Zealand. The known higher grade deposits are estimated to contain 280 million barrels oil equivalent.

"In Europe there are substantial oil shale deposits in the Balkan Peninsula and adjacent area, France, Germany, Great Britain, Italy, Austria, Switzerland, Luxembourg, Russia, Spain, Portugal and Sweden. The recoverable oil shale resources of Europe are estimated to contain a total of more than 30 billion barrels, mostly in shales that yield more than 25 gallons per ton. In South America, oil shale deposits are known to exist in Argentina, Brazil, Chile and Uruguay. These oil shale resources are estimated to contain 50 billion barrels of recoverable shale oil.

"In the United States, deposits of oil shale of varying nature and extent have been reported in the States of Alabama, Alaska, Arkansas, California, Colorado, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Missouri, Michigan, Montana, Nevada, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, South Dakota, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin and Wyoming. A large fraction of shale deposits of the United States contain small amounts of organic matter which will yield from one to five gallons of oil per ton on destructive distillation. These rocks have not been considered as oil shale. In addition, some sandstones, siltstones and limestones contain solid organic matter which yield very small amounts of oil. Possibly half or more of the sedimentary rock areas of the country will yield a small amount of oil. Oil shale can, therefore, be subject to several definitions. One authority defines oil shale as organic-rich shale that yields at least 10 gallons (3.8) percent of oil per ton.[7]

"The oil shales of highest concentration of organic matter are in the Green River Formation of Colorado, Utah and Wyoming and the Tiglukpuk Formation in Alaska. These are the only North American oil shales in the United States in the 25 to 100 gallons per ton range. The Green River Formation shales of this grade have been estimated to contain 600 billion barrels. The

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[7] G-97, pp. 3, 10-16; Tr. 3448, 3450, 3455.

The Contestant's exhibits are designated by the prefix "G" and the Contestee's by the prefix "C." "CFF" refers to the Contestee's Proposed Findings of Fact.

Tiglukpuk Alaskan shales of similar grade have been estimated to yield 250 billion barrels.[8]

"The Green River Formation is considered by geologists to have been formed in an inland lake which, at one time, covered an area of some 16,000 square miles in the States of Colorado, Utah and Wyoming. The formation resulted from lake and stream depositions extending over a period of some eight to ten million years. During the course of the evolution of the Green River Formation, tuff beds were formed in localized areas from airborne volcanic ash. In some instances, fairly great thicknesses of tuff were deposited.[9]

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"Foreign Oil Shale Activity

"Oil shale development in foreign countries stimulated interest in the possible development of Western United States shales and has relevance in determining what expenditures might prudently be made in the United States. Several of the foreign deposits have been commercially exploited.

"Production of fuels from oil shale preceded the production from petroleum. Shale oil was first produced in France in 1838. Subsequent oil shale operations were started in Scotland in 1850; Australia in 1865; Brazil in 1891; Germany in 1916; Sweden and Estonia in 1921; Spain in 1922; Manchuria in 1929; and South Africa in 1935. A number of these continued until recent years when they succumbed to eco-

[8] G-97, p. 9.

[9] Tr. 83, 86, CFF-1; CFF-10.

nomic pressures from the petroleum industry. Today, only the Estonian and Manchurian operations survive.[10]

"In France, the shale oil industry grew until about 1864 when competition of imported petroleum caused a decline. The French Government, at least intermittently, provided support of one kind or another, such as imports duties on foreign petroleum or direct subsidies. In 1893, oil shale production was about 190,000 tons. By 1900, production reached 220,000 tons, increased to 500,000 tons during World War II, and then declined. The industry ceased in the early 1960's.[11]

"The Scottish industry used oil shale, recovered by underground mining, which assayed generally in the range of 25 to 35 gallons per ton. After 1850, more than 140 companies and individuals engaged in oil shale ventures. By 1870, these were reduced to 51, and by 1910 only six companies remained. By 1920, the operations were consolidated under one parent company, Scottish Oil Ltd. The Scottish oil shale production in the early 1870's was approximately 500,000 long tons per year and reached 3,000,000 tons annually by 1910. Production thereafter gradually declined to essentially nothing in 1964.[12]

"Oil Shale Activity in the United States

"The oil shale industry in the United States started about 1850. By 1860 there were 53 companies producing oil by distillation of various bituminous substances, including oil shale. Natural petroleum was discovered

[10] G-290, pp. 29, 39; G-479, pp. 109, 110, 111; C-1025; CFF-45.
[11] G-281, p. 15; G-290, pp. 25, 26; G-419, p. 50; C-1025, pp. 1, 2.
[12] G-290, pp. 29, 30, 32, G-419, p. 56, 57.

at Titusville, Pennsylvania, in 1859 and the American petroleum industry came into being. This reduced the price of kerosene so much that oil shale operations became unprofitable. The plants were abandoned or adapted to petroleum refineries.[13]

"Interest in oil shale revived in the 1910 to 1920 period and has continued to the present time.[14]

"An examination of how prudent persons expended their means with respect to oil shale during this period will provide the guide in determining whether oil shale was, as of February 25, 1920, a valuable mineral. Because the evidence in this respect is massive, the examination is limited to some corporations and the Government, whose activities are directed by the composite judgment of experienced officers.

"*Robert M. Catlin,* a businessman and a member of the American Institute of Mining and Metallurgical Engineers, between 1890 and 1915 purchased approximately 140 acres of oil shale land, leased approximately 480, and obtained an interest in 140 acres of unpatented mining claims. He visited Broxburn, Scotland, in 1901 to study the Scottish shale oil operation, and in 1914 began research and development with the Elko deposits. In 1915, a 100-foot shaft was sunk in his mining property. The following year he erected a 20-ton per day retort which proved unsatisfactory and was later dismantled. In 1917, he incorporated the

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[13] G-290, pp. 60, 61; G-419, p. 99; C-721, pp. 38-39; C-853, p. 151; CFF-288.

[14] C-721, pp. 39-45.

'Catlin Shale Products Company' and transferred his oil shale land to the company for stock.[15]

"In 1918, the company began the construction of eight 100-ton per day retorts which differed in design from the 1915 models. The retorts were in operation in May of 1919 and by July the new plant had produced 15,000 gallons of shale oil. A refrigerator plant, wax press, stills and agitator were added to the plant the latter part of 1919 and early 1920. Sometime later, probably 1920, the Catlin Company's retorts were shut down. A third retort, 40 feet high and 12½ feet in diameter, was constructed and put in operation in December of 1921. This retort was operated intermittently until October 18, 1924.[16]

"In 1924, the shale oil products were offered for sale for the purpose of testing the market. The products apparently could not be marketed in competition with petroleum products. On December 23, 1930, the Company was dissolved. Its operation was admittedly experimental.[17]

"*The Oil Shale Mining Company* was incorporated in Colorado on October 2, 1916, as a public stock company with a capitalization of $100,000. It acquired six mining claims about 15 miles west of DeBeque, Colo-

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[15] G-23, p. 101; G-722, Part 1, pp. 9, 10, 12, 17, 18; G-722, Part II, p. 30, G-724E, G-724G, Lease No. 4349; G-724I, pencil notes of R. M. Catlin, Sr.; G-724N, Deeds 276-F, 278-F and 384-F; CFF-57; CFF-58, CFF-105.

[16] G-722, Part I, pp. 19, 20, 43; G-724H, Catlin letter, May 19, 1919; G-724J, letters of October 13, 1919 and December 2, 1919; CFF-78.

[17] G-722, Part I, pp. 13, 40, 41; G-722B; G-724B; G-724J, letter by R. M. Catlin dated August 8, 1919.

rado. In 1916, the company built a bunkhouse and a cookhouse near the claims. In 1917, the buildings were moved to a new location and an externally heated, six to eight-ton per day batch-type Henderson retort, 18 feet high and 12 to 15 inches in diameter, and a tramway were constructed. By the end of 1918 or the early part of 1919 the company had six of these retorts, only one of which was assembled and operated on an experimental basis. By 1920, the company experimented with a continuous type of retort, invented by its superintendent, A. V. Young, which was subsequently abandoned.[18]

"The company produced a few barrels of oil in 1920 and 30 barrels in 1921. Oil shale for the retorts was obtained from small pits on the claims during the period from 1917 to 1921. By 1926, the company lost its properties through attachments.[19]

"*The Monarch Shale Oil Company* was incorporated in October 1919. The corporation acquired 240 acres of oil shale land, located about 13 miles northeast of DeBeque, Colorado. By April 1921, the company had erected a Ginet retort (named after its inventor and president, Joseph H. Ginet), 18 to 25 feet long and 3½ feet in diameter, with a capacity of about 50 tons of shale per day. During 1921, the plant was operated on 11 or 12 occasions for short periods and produced a total of 71 barrels of shale oil. The retort was 'not run to any extent' during 1922 and was not operated

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[18] G-115, pp. 4, 6, 7, 14, 15, 20, 27, 40, 47, 114, 115, 130-133, 139, G-241, p. 30.

[19] G-115, pp. 28, 40, 113-118, 130; G-241, p. 30; CFF-57.

at all during 1923. Some test runs were made in 1924. The shale for charging the retort was taken from a tunnel driven 75 feet into the side of the cliff above the plant.[20]

"*The Mount Logan Shale Mining and Refining Company* was incorporated in Colorado in July 1917. It obtained seven unpatented mining claims located about five miles from DeBeque, Colorado, on Mount Logan. The company erected a plant in Western Colorado in 1918, using three Galloupe retorts of a 20-ton capacity per day. After test runs in 1919 and 1920 proved this retort to be unsatisfactory, the company erected a Simplex retort similar to the Galloupe. The Simplex was 21 to 30 feet long and about 3 feet wide with a capacity of about seven tons, producing 12 to 15 barrels a day. The company obtained its shale from a 100-foot tunnel into the cliff. The total cost of the plant was estimated at approximately $70,000. The corporation made some experimental runs of oil shale in 1920 and 1921. The company became defunct in October 1926.[21]

"*The Index Shale Oil Company* was incorporated in Colorado in October 1920. It obtained possessory title to eight oil shale claims and equitable ownership in an additional 15 others. Index began constructing an experimental plant in 1920 about 15 miles northwest of DeBeque, Colorado, using the Brown retort invented

[20] G-116, pp. 4-8, 14, 20, 48, 67, 70, 71, 80, 86, 93, 101, 106, 119, 120; C-212.

[21] G-61, No. 8; G-117, pp. 1, 7, 9, 10, 12, 15, 19, 20, 24, 31, 32, 34, 59, 61, 75, 89, 99-102, 118, 143, 145; G-168, p. 21; C-213, p. 326; C-455; C-457; C-959, pp. 31, 32; CFF-80, CFF-106.

by its largest stockholder, Harry L. Brown. The retort was 75 feet long, two and one-half feet in diameter. Experimental runs of oil shale indicated that changes in design and equipment were necessary. Additional equipment was added in 1926. In 1928 the company was in receivership. The corporation mined its shale from a tunnel driven 60 feet into the face of the cliff.[22]

"*The March Oil Company* was incorporated in August 20, 1917, in the State of Colorado by a group of businessmen, including K. C. Schuyler. The company's mining property, consisting of about 2,400 acres of oil shale, was located three to four miles north of Grand Valley on Parachute Creek. In 1917 the company leased its mining claims to K. C. Schuyler who agreed to work the claims and to refine and dispose of oil shale and its products. In 1920 and 1921 Schuyler and George Taff, working for or in partnership with Schuyler, constructed a plant at a cost of $100,000. The plant consisted of some buildings and sheds, a one-and-one-half-mile tramway, crushers and engine. A retort was designed by Taff, ordered from a Wisconsin manufacturer, but never delivered. In mid-1921 a cable on the tram broke killing nine men. The plant was never completed.[23]

"*The Continental Oil Shale Mining Company* was incorporated in Arizona in November 1920. The company obtained mining claims by merger with the Oil Devel-

[22] G-118, pp. 1, 2, 31, 47, 49, 51, 52, 53-130, 154, 155, 163, 165, 166, 167; G-624E, pp. 172-207.

[23] G-61, No. 18; G-125, pp. 10, 15, 19, 21, 22, 30, 43; C-972, Exs. No. 1, pp. 1, 2, No. 3, p. 1, No. 4, p. 7, and Nos. 10 and 12; C-973, p. 54; CFF-81; CFF-353; CFF-358; CFF-362.

opment Company. In 1919, it constructed a plant, 20 miles north of Rifle, Colorado, on Piceance Creek, consisting of a bunkhouse, a residence for a superintendent, a blacksmith shop, a crusher, and a Colorado continuous retort, invented by two Denver engineers. The vertical retort was about 22 feet high and two feet in diameter, having a capacity of 50 tons of shale per day.[24]

"*Shell Oil Company* became interested in oil shale by 1945. By August 1954, Shell had acquired 3,624 acres of oil shale property at a cost of $123,014.35. Shell continued to acquire oil shale lands. In 1965, it entered into an option to purchase the Cathedral Bluff claims in the Piceance Creek Basin. The options on these 21,000 acres specified a purchase price of $2,000 an acre. The total cost to Shell would be in excess of $43,000,000, including $1,000,000 as the cost of maintaining the option. In the span of 10 to 15 years, the price of oil shale lands to Shell had risen from 500 to 700 percent and in the two years prior to 1964 had risen as much as 250 percent. As of 1964, Shell's holdings consisted of 5,300 acres of fee property, options to purchase 3,300 acres of fee lands and options to purchase 24,400 acres of unpatented mining claims. During the period of acquisition of the oil shale claims, Shell made economic studies of the feasibility of extracting and refining oil from oil shale, but has no current plans for mining and processing oil shale.[25]

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[24] G-61, No. 13; G-126, pp. 35, 44, 70, 71; G-168, p. 15; G-580, LL-4, p. 1-16; C-454, p. 4.

[25] G-509, p. 31; G-514, pp. 31, 80, 81; C-741; Tr. 4815, 4816, 4844, 4848, 4916; CFF-318.

"*Cities Service Company,* through its subsidiary Empire Gas & Fuel Company, began locating oil shale claims in Sweetwater County, Wyoming, in 1918. By August 1923, the company asserted ownership in 48 claims, totaling 7,680 acres of oil shale land. The evidence does not indicate whether Cities Service Company presently asserts title to these early locations.[26]

"In early 1951, Cities Service Oil Company, a subsidiary of Empire Gas & Fuel Company, acquired an option to purchase 8,300 acres of oil shale land at $50 per acre, which it exercised in 1953. Since 1952, Cities Service Oil Company has acquired about 10,000 acres of oil shale land in Garfield County, Colorado, at a cost of about $500,000. Other than the acquisition of oil shale properties, Cities Service Oil Company's activities have been limited to core drilling and testing of oil shale samples. The company has no program for the commercial development of oil shale.[27]

"*Standard Oil Company of California* began investigating the possibilities of producing shale oil and refined products from oil shale in 1918. The investigation included geological examination of the oil shale in California, Nevada, Utah and Colorado, the 'devices for utilization' of them, and an economic analysis of the possible profitability of doing so. Laboratory retorting experiments were conducted in 1920 and from 1925 to 1928. In 1921, the company obtained a patent for its process of 'hydroxination of oil shale' developed

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[26] G-636E, pp. 60, 111, 116, 129; G-636F, pp. 11, 16; CFF-110.
[27] G-636, pp. 7, 8, 9, 10, 12, 30; G-636F, pp. 18, 23, 24; CFF-314.

by its research. In 1925, the company made intensive studies on the extraction of oil from solids.[28]

"Standard began the purchase of Colorado oil shale land in 1943. By 1954, it had acquired 39,736 acres of patented land, 8,057 acres of unpatented mining claims, and an option or a partial interest to 17,628 acres, for a total of 65,421 acres. The total cost of this acquisition was approximately $5,000,000. By 1967, the company's patented land totaled approximately 44,000 acres in blocks of sufficient size to support a commercial oil shale operation. The company is now one of the largest holders of patented oil shale land.[29]

"*Standard Oil Company of Ohio (Sohio)* first became interested in oil shale in 1962. From 1964 through 1967 the company spent or obligated itself to spend $28,800,000 for acquisition of 43,631 acres of patented oil shale lands in the Green River Formation. In addition, the company holds interests in options which, if exercised, would entail additional investments.[30]

"*The Oil Shale Corporation (Tosco)* interested Sohio in its retorting process. In September 1964, the two companies joined with Cleveland Cliffs Iron Company in a joint venture agreement and formed the Colony Development Corporation for the purposes, among others, of building and operating a prototype plant to determine the economic feasibility of the Tosco II process, developing an experimental mine and mak-

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[28] G-629C, pp. 4, 12, 13, 27-47, 68, 69, 75, 78, 97, 98; C-723, Part I, p. 57; C-567, p. 1; CFF-110.

[29] G-629, p. 28; G-629B; G-629D, p. 149; G-629E; CFF-311.

[30] G-604, pp. 8, 19-20; G-604A.

ing engineering and cost studies directed to the establishment of a commercial oil shale operation. Facilities, including a 1,000-ton per day prototype retort, were constructed and placed in operation in 1965. During its subsequent operations the plant produced over 50,000 barrels of crude shale oil. By June of 1966 sufficient prototype data had been obtained to enable a qualified engineer to make an order of magnitude estimate of the capital cost of a commercial plant. The estimate came out substantially higher than the studies made prior to the construction of the plant. A difference of opinion relative to the causes and solution of this problem developed between the joint venturers. Sohio and Cleveland Cliffs felt that the problems of reducing capital costs should first be solved, then the prototype redesigned and operated. Tosco wanted to operate the plant and solve the high capital cost problem simultaneously. The differences were solved in September 1966 by placing the agency company, Colony, on an inactive status, having Cleveland Cliffs continue the mining experiment for the joint accounts of the joint venturers, and permitting Tosco to continue operating the retort for its own account. If the project were successful, the joint venturers contemplated entering into a commercial operation. In accordance with the agreement, Sohio studied alternative processes for extracting oil from shale. In 1966 it agreed to an exchange of information with Union Oil Company after joint studies of Union's retorting process.[31]

[31] G-604, pp. 24, 25, 26, 29, 37; G-604C; Tr. 5063; CFF-298.

"Tosco holds an interest in over 30,000 acres of oil shale lands in Colorado and Utah acquired at a cost of about $10,000,000.[32]

"Tosco's president testified that the company intends to have a commercial plant of approximately 53,000 barrels per calendar day 'on stream' during 1970.[33]

"*Texas Oil Company (Texaco)* began exploring the possibilities of oil shale in 1918, and began acquiring interests in the oil shale lands of the Green River Formation in 1927 through the acquisition of the California Petroleum Company and its subsidiary, the Colorado-Ventura Company. Since 1927, the company has acquired 29,000 acres of patented oil shale lands in Colorado and Utah at a cost of $1,500,000. From 1945 to 1947, Texaco made a refining study of oil shale for the Navy at its own expense. Beginning in 1957, after experimentation with other methods of extracting oil from shale, Texaco constructed and operated a pilot plant and developed its own 'hydrotorting process for extraction of shale oil.' The company has spent over $1,000,000 in oil research in the past 20 years.[34]

"*Mobil Oil Corporation's* interest in oil shale began in 1940. A research program to evaluate the potential of shale as a source of oil was begun in 1943. A pilot plant was constructed at Paulsboro, New Jersey, and an experimental program was carried out between 1943 and 1945. Further research and study of oil shale was

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[32] C-1065; CFF-316.

[33] Tr. 5069; CFF-328; CFF-332.

[34] G-642, pp. 20, 25, 26, 43-45, 51, G-642C, p. 41; G-642F, G-642G; CFF-313.

continued. Since 1965, the company has been conducting a research program at Anvil Points in cooperation with five other major oil companies which includes additional refining, economic and mining studies. Mobil has, since 1955, purchased oil shale lands of the Green River Formation. At the present time, it holds an undivided half interest in 24,591 acres of patented oil shale land, the entire interest in 10,131 acres of patented oil shale land, for which it paid approximately $3,000,000. It also holds an option to purchase 17,440 acres of unpatented oil shale claims and 330 acres of patented land which, if exercised, will cost an additional amount of approximately $1,800,000.[35]

"*Union Oil Company of California* became interested in oil shale in 1920. Since 1920, the company has acquired an interest in 57,319 acres of oil shale land, of which 37,166 are patented, and a 'surface only' interest in an additional 2,617 acres, at a cost of over $2,500,000. Beginning in 1924, Union conducted studies of existing oil shale processes, made analyses of oil shale samples and undertook an oil shale research program. Starting in 1944, it constructed and operated an experimental retort with a two-ton per day capacity. In 1948 it completed a scale-up model with a 50-ton per day capacity which was dismantled in 1956. Union spent a total of $438,000 on oil shale research from 1947 to 1954. On January 31, 1955, Union's Board of Directors approved a $5,000,000 expenditure for a two-year oil shale research project, which would include the erection of a demonstration plant in Colorado of one thou-

[35] G-633, pp. 8-10, 39, 40; G-633A; G-633B, p. 1; CFF-312.

sand tons per day capacity. The demonstration plant was started in 1955 and completed by May 1957. The plant was run intermittently into July 1958.[36]

"*Major Oil Shale Holdings*

"Oil companies and other business interests have become interested in the commercial prospects for oil shale development. In addition to expenditures for developing technology, many companies have acquired interests in land containing oil shale deposits in the Green River Formation. In the Piceance Basin, the major owners of either patented or unpatented oil shale claims, were, as of 1964:

A. *Large Oil Companies*

Cities Service Company
Continental Oil Company
Getty Oil Company
Gulf Oil Company
Humble Oil & Refining Company
Marathon Oil Company
Pan American
Pure Oil Company
Shell Oil Company
Sinclair Oil Corporation
Socony Mobil Oil Company, Inc.
Standard Oil Company of California
Texaco, Inc.
Union Oil Company of California

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[36] G-625, pp. 14, 15, letter dated June 20, 1920; G-626, pp. 61, 92, 112-117, 222, 232, G-895, G-927, pp. 2-4; C-905; C-907, pp. 5, 6, Fig. 5; C-910; CFF-310; CFF-317.

B. *Major Group Holdings*

Dow Chemical Company
Doyle, et al.
Dutton
Eaton Shale Company
Energy Resources Technology Land Company
Gabbs Exploration Company
Kerogen
Massive Group
Oil Shale Corporation
Parachute Oil Shale Company
Ruth Group (Ertl et al.)
Savage Oil Shale Development Company
Sunset Group (Gabbs Exploration Company)
Texas National Petroleum Company
Wasatch Development Company [37]

"Oil Shale Research by the United States Government

"The United States Government conducted extensive oil shale research. A 1901 Government publication noted the occurrence of oil shales in Colorado and Utah. In 1913, efforts were started by the Government to determine the extent of the deposits and their oil potential. In about 1916, the Bureau of Mines began laboratory work on oil shale in Washington, D.C., and by 1919 laboratory facilities were operated in Utah.[38] The work in Utah included standardizing methods of

[37] C-333, p. 5; CFF-309.
[38] G-419, p. 99, C-850, CFF-64.

testing, studying methods of assaying oil shale for commercially recoverable oil and ammonium sulfate, conducting retorting experiments on different oil shales and analyzing shale oils and other products manufactured by different retorting processes and refining the retorted oils to determine the commercial value of the refined products.[39]

"In January 1920, the Bureau of Mines established, under an agreement with the State of Colorado, a laboratory at Boulder, Colorado. The following month small scale experimental studies, concerned primarily with fundamentals of oil shale retorting and yields and characteristics of shale oil products, were begun.[40]

"In 1924, a Presidential Naval Fuel Oil Committee, appointed to study the problem of obtaining adequate supplies of fuel oils for the Navy, recommended that the Bureau of Mines determine the feasibility of oil shale as a source of shale oil. Congress authorized the construction of a pilot oil shale plant and during the four-year program appropriated more than $229,000 for the study. The Bureau erected two large-scale experimental retorts at Rulison, Colorado, the Pumpherston and the NTU, and opened a quarry at Anvil Points to provide oil shale for the program. The oil shale mine and the retort were operated periodically from 1926 through 1929. The refining studies showed that the shale oil could be refined to acceptable products, al-

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[39] G-419, p. 99; C-8, p. 70; C-276; C-717; C-850; CFF-64; CFF-93.

[40] C-330.

though less readily than conventional crude petroleum.[41]

"In 1944, Congress passed the Synthetic Liquid Fuels Act (P.L. 290, 78th Cong., App. April 5, 1944; 58 Stat. 190, 30 U.S.C. 321 et seq.). The Act authorized the Secretary of the Interior to construct and operate demonstration and pilot plants to produce synthetic liquid fuels from oil shales, coal, agricultural and forestry products and other substances and to conduct laboratory research. The Bureau of Mines constructed a demonstration plant at Rifle, Colorado, which included two NTU retorts and opened an oil shale mine at Anvil Points. The retorts were first operated in May 1947.[42]

"Other pilot plant operations were conducted. One was at Pueblo, Colorado, using a Hayes low temperature coal carbonization retort under a cooperative agreement with the Colorado Fuel and Iron Corporation and another at Wilson Dam, Alabama, using a Royster retort owned by the Tennessee Valley Authority. As a result of the experience gained in the operation of the retorts and study of other processes, a Gas Flow retort was designed by the employees of the Bureau of Mines in 1946 and 1947. A retort embodying the principles considered to have the best prospects of success and a pilot plant incorporating these features was built at Rifle, Colorado. Later, another retort, the

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[41] G-246, pp. 1525, 1533-1534; G-302, pp. 299, 307; G-438, pp. 1, 5, 6, 25, 27, 150; C-277, p. 60; C-284; C-286-289; C-383, letter dated June 5, 1924, from Secretary Work to Director, Bureau of the Budget, pp. 1, 2; CFF-256; CFF-257; CFF-258.

[42] G-139, p. 32; G-159.

Dual-Flow, was designed, constructed and operated. Originally, the authority of the Synthetic Liquids Fuel Act was limited to five years, but two amendments extended the period covered by the Act to a total of 11 years, ending in April 1959. During those 11 years about $82,000,000 was expended. Of this amount, nearly $22,000,000 was directly applicable to work on oil shale.[43]

"Since the end of the Synthetic Liquid Fuels Program, research work by the Federal Government has continued at the Bureau of Mines Research Center at Laramie, Wyoming. The annual budget for this work for the past 20 years has been about $1,500,000.[44]

"The foregoing is illustrative of the expenditures made by corporations and the Government in the promotion and development of oil shale.

"*Cost Studies*

"An objective of the Bureau of Mines programs at Rulison and Rifle, the Union Oil Company's demonstration plant and the Tosco-Sohio-Cleveland Cliffs operations, was to obtain data upon which an informed judgment could be made as to whether expenditures in an oil shale mine would be justified. Not until a commercially feasible mining and retorting process competitive with petroleum was developed could a prudent man expect to develop a profitable oil shale mine.

"All of the cost studies indicated that oil shale was not competitive with petroleum. At the request of the

[43] G-139, pp. 37, 41-44, 47, 90, 91; G-159; G-467, p. i; C-545; CFF-308.

[44] Tr. 3472, CFF-308.

Secretary of the Interior, the National Petroleum Council made a study in 1950 and 1951 of synthetic fuel costs, including synthetic fuels derived from oil shale and prepared a final report dated February 25, 1953. The Economic Subcommittee made estimates of the cost of producing gasoline from oil shale under various assumed conditions. These costs varied between 13.9 cents [per gallon], where the hypothetical plant included no housing or community development, to 15.2 cents where the assumed operation included complete housing and community development, including housing for employees, housing for tradespeople, teachers, general community facilities comprising streets, utilities, schools, and commercial buildings. The Committee's reports stated that 'neither of these cases [the minimum and maximum expenditures], however, is believed to represent the probable situation. In order to obtain an adequate stable labor supply at the minimum investment, it is the opinion of the Subcommittee that the housing program would approach that of [housing for employees and general community facilities].'[45]

"Where only general community facilities were provided, the Economic Subcommittee determined the cost of producing gasoline from oil shale would be 14.7 cents per gallon. The cost included taxes and an assumed six percent return on invested capital. The average refinery price for gasoline in Los Angeles at the time of the study was 11.7 cents per gallon. In the final report

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[45] G-300; G-451, Appendix A1, Appendix I40-41; CFF-334.

of the National Petroleum Council's Committee on Synthetic Liquid Fuels Production Costs, February 26, 1953, the committee stated that for each increase of one percent return on investment after taxes the gasoline costs from the single plant cases would be 1.3 cents per gallon. This ratio indicates the shale oil plant could, in 1951, have been operated at a slight profit. However, the committee concluded that a return of between 12 and 15 percent on total invested capital would be required in order to attract investment capital.[46]

"The Bureau of Mines made a cost study in 1951. While the Bureau and the National Petroleum Council were 'in good agreement on many points,' there was wide diversion on some items. The Bureau estimated that 'with a capitalization of 50 percent equity and 50 percent borrowed funds, and with all products selling at market values, the rate of return on equity capital would be 11.2 percent after interest charges and income taxes,' and stated: 'Although this return is less than the average return of the petroleum industry, as indicated by published figures, it is high enough to warrant serious attention.'[47]

"In 1965 and 1966 employees of the Bureau of Mines, augmented by outside consultants with backgrounds in mining, retorting and refining techology, cost engineering, marketing, economics and finance, prepared for use in this contest a cost analysis for commercial scale oil shale plants on the contested claims for the years

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[46] G-300, p. 9; G-451, p. 29, Appendix I40.

[47] G-459, pp. ii, iii; CFF-335.

1915, 1918, 1919, 1920, and 1966. The primary purpose of the studies was to determine the prospective cost and profitability of a commercial oil shale installation at the selected points in time, based on the information available at that time, or on whatever assumptions would have been necessary and reasonable to one making such a study.[48]

"The design for the period 1915-1920 included the production of 1,000 tons of oil shale per day in an underground mine, crushing the shale, a battery of Pumpherston retorts as used in the Scottish oil shale industry, and a refinery producing shale oil gasoline, burning oil, gas oil, residual fuel oil, coke and ammonium sulfate, as well as a railroad, housing for employees and supporting facilities.[49]

"The design for the 1966 period required mining of 60,300 tons of oil shale per day in an underground mine, crushing the mined shale, retorting the crushed shale in retorts of the gas combustion type, and treating and refining the shale oil at preliminary facilities in Colorado and a refinery in St. Louis. The products of the operation would be petroleum gasoline, diesel fuel, coke, ammonia, LPG, gas and sulphur. The plant and related facilities were estimated to require a capital investment of approximately $135,000,000. The study showed the following yields after taxes.[50]

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[48] G-139, p. 182; G-290, pp. 143, 146, 172; G-665; G-666; G-667; Tr. 3126, 3263-3272.

[49] G-665, pp. 1-18.

[50] G-667, 1966 Study, pp. 1-17, 51, Table 19; G-673; G-674; G-683, G-683A; Tr. 2348, 2353-2356; CFF-337.

Project	Book Yield on Equity	Book Yield on Net Plant	True Yield
1915	7.1%	8.8%	6.5%
1918	6.6	8.3	7.0
1919	3.0	3.7	3.5
1920	Neg.	Neg.	0.0
1966	11.3	15.1	9.84

"The study indicated the following maximum payback periods:

Project	Years
1915	11.5
1918	10.7
1919	14.0
1920	18.8
1966	5.3

"The various studies disclose that since about 1951 marketable products from oil shale of the Green River Formation could be produced in a commercial-scale installation at a profit. However, that profit would be too small to be competitive with petroleum or to attract prudent investment capital. In 1966 a minimum book yield of at least 14 percent after taxes, a true yield of at least 11 percent after taxes and a payback period of not less than 4.2 years would be required on typical new investment. For nontypical investment such as an oil shale plant, a higher rate of return would be required. Required book and equity yields during the

1915 to 1920 period would probably have been higher than in 1966.[51]

"*Profitability of an Oil Shale Mine*

"As previously stated, the test of validity is whether an investor in an oil shale mine as of February 25, 1920, and since, had a reasonable prospect of developing a profitable mining operation.

"Many millions have been spent on oil shale since the revival of interest in this mineral in the early 1900's. But substantially all of the expenditures that could be considered prudent were for (1) research and development of a technically and economically feasible mining and retorting process, or (2) purchase of mining claims. Until a research program had demonstrated that shale oil could be produced at a cost competitive with petroleum, no prudent person would attempt to develop an oil shale mine. He would have no market for his product. The very fact that, in the more than half a century of interest in oil shale claims for the Green River Formation, not one profitable mine has been developed is a compelling reason for concluding that expenditure of money to that end would be imprudent. As the Department said in *United States* v. *E. A. Barrows and Esther Barrows,* 76 I.D. 299 (1969) (at p. 306):

> * * * the fact that nothing is done toward the development of a claim after its location may raise

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[51] G-683; G-683A; Tr. 2322, 2330, 2331, 2373, 2376, 2377; CFF-287; CFF-293–CFF-297; CFF-321–CFF-328.

a presumption that the market value of the minerals found therein was not sufficient to justify the expenditure required to extract and market them. See *United States* v. *Everett Foster et al.*, 65 I.D. 1 (1958), *affirmed in Foster* v. *Seaton*, 271 F.2d 836 (D.C. Cir. 1959); *United States* v. *Alfred N. Verrue*, [75 I.D. 300 (1968)].

[*Barrows* was subsequently affirmed. *Barrows* v. *Hickel*, 447 F.2d 80 (9th Cir. 1971). *Verrue* was subsequently reversed, the Court holding in effect that the presumption of invalidity raised by lack of sales had been overcome. *Verrue* v. *United States*, 457 F.2d 1202 (9th Cir. 1972).]

"The Contestees argue that the money spent or obligated in the acquisition of oil shale claims, amounting to as much as $2,000 per acre, proves that oil shale was a valuable mineral deposit and, therefore, 'open to exploration and purchase' under the mining laws. Oil shale claims derive their market value from the expectation that at some time in the future shale oil will become competitive with petroleum. Market value of a mining claim is not the test for discovery of a 'valuable mineral deposit.' The mineralization must be such, not to justify the purchase of the mining claim for possible future development, but to justify present expenditures with a reasonable prospect of developing a profitable mine. 'To allow such land to be removed from the public domain because unforeseeable developments might some day make the deposit commercially feasible can hardly implement the congressional pur-

pose in encouraging mineral development.' *Foster* v. *Seaton*, 271 F.2d 836 (at p. 838) (C.A. D.C. 1959)."

* * * * * * *

The evidence may be summarized as follows. The history of both actual and attempted oil shale operations at home and abroad has been intimately connected with the development of the liquid petroleum industry. Generally, the rise of the modern petroleum industry paralleled the decline of commercial oil shale operations.

In Scotland and France once flourishing oil shale operations have declined to essentially nothing. In both cases the demise of oil shale operations was due to increasing availability of liquid petroleum at a price which made oil shale products unattractive. In Scotland this change was apparently due to natural market forces. In France oil shale was supported far beyond the time when it could compete on its own by a government program of subsidy and import controls. In the United States the demise of oil shale operations began with the discovery of liquid petroleum at Titusville, Pennsylvania in 1859. Within a few years the domestic industry had succumbed.

Early in this century interest in the commercial exploitation of oil shale was revived. Again, the reason for this revival of interest was tied closely to the then-perceived vicissitudes of the liquid petroleum industry. With the advent of the automobile consumption of petroleum increased dramatically; it then seemed to some that the world's reserves of liquid petroleum

would be exhausted within a few years. As a result, many claims, including the claims in these proceedings, were located in the few years prior to 1920 in what the Supreme Court has characterized as a period of speculative fever. *Hickel* v. *Oil Shale Corp.*, 400 U.S. 48, 54 (1971). Innumerable attempts at achieving profitable operations were made, some on an experimental basis and some on a full-scale production basis. The result in every single case was failure to achieve a profitable operation. The reason is clear: the ultimate reduction of oil shale to oil was simply too costly to permit successful competition with liquid petroleum.

Since 1920 those principally interested in oil shale have been large oil companies and the Government. As appellees have pointed out, the large oil companies have spent several millions of dollars acquiring patented and unpatented mining claims; several millions have also been spent on research, mostly on establishing prototype operations. However, virtually no money has been expended on initiating actual commercial mining operations on these claims. One company that has attempted commercial operations on other claims (TOSCO) has failed to show either substantial production or profits. (Tr. 5063-5069).

For its part, the Government has spent several millions over the years on prototype plants and on research aimed at finding new methods of processing oil shale at a cost more favorable with the costs of the liquid petroleum industry. The Government has never developed a plant capable of commercial production.

Both the oil industry and the Government prepared

studies attempting to show with some precision the probable costs and rates of return of a hypothetical operation. The National Petroleum Council prepared a study in 1951 at the request of the Secretary of the Interior. (Ex. G-451). The conclusion of that study was that a small rate of return could have been realized, but that such return was so much less than the rate of return the oil companies could achieve on other investments at that time that an oil shale operation could not attract investment capital.

The Bureau of Mines also made a study in 1951 with some differences in the data and basic assumptions used by the National Petroleum Council. Though on some points the studies were in agreement, the Bureau of Mines study showed a substantially higher rate of return, 11.2 percent; but again, that return was less than the average rate of return in the oil industry and was therefore considered unlikely to attract investment capital. (Ex. G-459).

Another study was prepared by the Bureau of Mines specifically for these contest proceedings. The study was made for the years 1915, 1918, 1919, 1920 and 1966. (Exs. G-666, 667). Many experts in mining, engineering, and finance were consulted to determine the possible profitability of a hypothetical mining operation based on the best available methods of mining for each time period. For the 1915-1920 period the projected returns ranged from 0 percent to 7 percent. For 1966 the return was estimated at 9.84 percent on a net investment of $185,000,000. In each case the projected rate of return was found to be too low to attract investment

capital since the alternative investment opportunities available to the oil companies were far more attractive, especially considering the risks involved in initiating operations which had never succeeded before.

In the proceedings below appellant and appellees seriously questioned some of the assumptions utilized in the studies. Appellant asserts that certain by-products which increase the revenues in the 1915-1920 period could not have been sold, and consequently no profit whatever could have been realized in that period. Appellees argue that the costs for community facilities necessary to attract sufficient labor were overstated. In addition, appellant has pointed to the disparity in the results of the 1951 studies as evidence of the inherent difficulties with these hypothetical studies.

We conclude as follows. First, as a historical fact, the commercial production of oil from oil shale has never been competitive with the liquid petroleum industry. Second, the hypothetical studies at best confirm that the commercial exploitation of oil shale would not be competitive with the liquid petroleum industry. Third, without exception, every oil shale operation that has been attempted in this country has failed to show profitable production. Fourth, appellees have held these claims for half a century without attempting to exploit them.

It is unlikely that any oil shale operation could have operated at a profit at the time these claims were located or at any time up to and including the time of these contest proceedings. In so concluding, we have obviously discounted the studies which show that a

profit, however meager, could have resulted from actual operations. We do so for three principal reasons. First, the history of innumerable attempted operations admits of no other conclusion. In spite of what the hypothetical studies show, it remains an incontrovertible fact that there has never been a single oil shale operation in this country which could show profitable production.

Second, the studies themselves were not buttressed by the experience of successful commercial operations. While that in itself would not disqualify their use as evidence, it does make them heir to an infirmity which was expressed by Alfred North Whitehead in a lecture on historical foresight:

> The main difficulty * * * is the power of collecting and selecting the facts relevant to the particular type of forecast which we wish to make. Discussions on the method of science wander off onto the topic of experiment. But experiment is nothing else than a mode of cooking the facts for the sake of exemplifying the law.[52]

Third, a half century of failure to develop a single commercial operation, on these claims or any others, lends emphasis to the conclusions of the studies that whatever the rate of return, it would have been insufficient to attract investment capital in actual operations.[53]

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[52] A. WHITEHEAD, *ADVENTURES OF IDEAS* 88 (Free Press ed. 1967).

[53] If there were an actual mining operation on these claims which was earning the 9.84% return projected in the 1966 study we would

While oil shale can be found on these claims in great quantity, no attempt has ever been made to develop those deposits. Therefore, the oil shale deposits found on these claims never have been a valuable mineral deposit within the meaning of the general mining law.

In order for a commercially profitable operation to come into being there must be either a dramatic improvement in the technology or an alteration of the economic forces which have always operated in this country to prevent the commercial production of oil shale. The significant increases in national and world population, the increasing American per capita demand for energy, the diminution of available supplies and reserves of other energy sources, the complexities of international politics and economics, and the new awareness of environmental considerations, all acting in combination, may indeed soon compel consumers to accept shale oil and to pay what always theretofore would have been an exorbitant and noncompetitive price.

However, speculation that oil shale may someday be valuable in an economic sense is not evidence of its present value as of 1920 or 1966. The right to receive title to federal public land cannot be supported by such speculation. To do so would be to reject scores of case authorities which define "valuable mineral deposits" as that term is employed in the statute. 30 U.S.C. § 22 (1970).[54]

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be loath to declare the claims invalid. However, for reasons already stated, we do not believe that the studies are reliable.

[54] On November 30, 1973, the Department of the Interior an-

III. The Nature and Effect of Departmental Precedent

Between 1920 and 1960 the Department consistently recognized oil shale as a valuable mineral deposit. During that period 523 patents for 2,326 oil shale claims embracing 349,088 acres were issued. The theory upon which these claims were patented is set out in *Freeman* v. *Summers*, 52 L.D. 201 (1927).[55] The parties in *Free-*

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nounced a prototype leasing program, 38 F.R. 33186. Sealed bids were submitted and subsequently opened on January 8, 1974, and February 12, 1974. The high bid on January 8, for Colorado Tract C-A encompassing 5,089.70 acres was $210,305,600. The high bid on February 12 for Colorado Tract C-B encompassing 5,093.90 acres was $117,788,000.36. Subsequently, two tracts of comparable acreage in Utah were offered and received high bids of $75,596,800 and $45,103,200. Notwithstanding this vote of confidence in the future of oil shale as a source of oil, it must be noted that oil has not yet been produced from oil shale in paying quantities.

[55] *Freeman* was preceded by the *Instructions* of May 10, 1920, 47 L.D. 458 (1920), which stated that oil shale was a mineral of economic importance and that it was subject to location and appropriation under the mining laws, if valuable. The instructions were based in part on a letter dated May 23, 1916, from the Director, Geological Survey, to the Commissioner of the General Land Office, advising the Commissioner of the classification of certain lands. The Director stated in the letter:

"In view of the high prospective mineral value of lands underlain by oil-shale deposits it is, of course, apparent that they should not be permitted to be acquired under the nonmineral land laws. The lands have not been recommended for withdrawal because the oil-shale industry is not yet developed in the United States, and as it is desired to give opportunity for the establishment of experimental plants, it is believed the lands should remain open for the present to acquisition under the mineral-land laws, even though they are ambiguous and but poorly adapted to deposits of this type."

We would construe the 1920 Instructions as simply directing that oil shale patent applications be adjudicated on the same basis as applications based on the alleged discovery of other minerals. However, since approximately 200 patents were awarded before *Freeman* issued, such instructions were obviously construed as implicitly

man were in a position similar to that of the parties in *Castle* v. *Womble,* 19 L.D. 455 (1894). Summers had applied for patents to his homestead and stock-raising entries. Freeman and the Standard Shales Products Corporation protested on the basis that they had discovered a valuable mineral deposit, oil shale, on the same lands. That assertion was eventually sustained by the Department of the Interior. The issue in dispute in *Freeman,* from the beginning to the end of the proceedings, was not value. Rather, it was the extent to which geologic inference could be relied on to establish discovery of richer oil shale beds once thinner beds had been found.[56]

The basic substantive error in *Freeman* is its underlying assumption that possible future value for mining meets the requirement of present value:

> While at the present time there has been no considerable production of oil from shales, due to the fact that abundant quantities of oil have been produced more cheaply from wells, there is no possible doubt of its value and the fact that it con-

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recognizing the future value concept expressly enunciated seven years later in *Freeman.*

Subsequent to *Freeman* the Department and the Bureau of Land Management issued various pronouncements relating to oil shale, some implicitly and others explicitly recognizing *Freeman* v. *Summers. See, e.g.,* Departmental directive of May 1931 (Ex. G-149); BLM Monograph of April 1954 (Ex. C-317); BLM Director's Memorandum of September 9, 1957 (Ex. C-356).

[56] Basically, the mineral claimants asserted that a discovery of any part of the Green River formation was a discovery of a valuable mineral deposit, since eventually one would be lead [sic] from some thinner beds of shale to the richer ones.

> stitutes an enormously valuable resource for future use by the American people.
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> 52 L.D. at 206.

In the 102 years since enactment of the general mining law, value has always been determined upon present facts, not upon possibilities of the future. Ostensibly, the reasoning in *Freeman* with respect to future value was based on *Castle* v. *Womble, supra.* But it was stated in that case that

> * * * the requirement relating to discovery refers to present facts, and not to the probabilities of the future. In this case the presence of minerals is not based upon probabilities, belief and speculation alone, but upon facts, which, in the judgment of the register and receiver of your office, show that with further work, a paying and valuable mine, so far as human foresight can determine, will be developed.
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> 19 L.D. at 457.

The only precedent cited in *Freeman* in support of the proposition of possible future value is *Narver* v. *Eastman,* 34 L.D. 123 (1905). But *Narver* arose under the Timber and Stone Act of June 3, 1878, 20 Stat. 89 (repealed Aug. 1, 1955, 69 Stat. 434). It was not governed by the general mining law. In that case the granting of a patent to an agricultural entryman was protested by a claimant who had located the same area for building stone. The evidence clearly showed that the costs of extracting and marketing the stone far exceeded any possible revenues which might be realized

from the sale of the stone. Nevertheless, based on reasoning which may only be described as obtuse, the land was found to be valuable for building stone:

> * * * It does not follow that because there is no clear profit arising from the sale of an article that has been manufactured or produced that it has no commercial value. Take for example the farmer. In the course of husbandry it frequently happens that different crops raised by the farmer when put in market do not sell for enough to pay the costs of their production and transportation, but can it be truly said that crops have no commercial value simply because after the same have been sold and all expenses incident to their production and shipment deducted, there is no clear gain to the farmer, and therefore, as a corollary, that the lands are not valuable for agricultural purposes?
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> 34 L.D. at 125.

This was the reasoning relied on by *Freeman* for the proposition that possible future value constitutes discovery of a valuable mineral deposit. We would agree that it is prudent for a farmer to sell his crops, even if there is no clear profit, assuming, however, that the costs of planting have already been incurred and that any *additional* costs such as harvesting and transportation will be *less* than the income to be realized from the sale of the crop. But if the farmer could foresee *before* planting the crop that he could not realize a profit, we do not believe that he or any other prudent man would undertake investment on those terms. Yet that was the

case with the building stone claimants in *Narver* and with the oil shale claimants in *Freeman*. Since *Freeman* is clearly contrary to the mining law, we hold that it must be and is overruled.

Appellees argue, in effect,[57] that if *Freeman* and the policy enunciated therein are overruled, such action may only be given prospective application. They cite several lines of authority which hold that, in certain circumstances, long standing administrative interpretations of various statutes may not be overruled in a manner which would have a retroactive effect on those who have relied on the previous interpretation to their detriment. Those lines of authority may be roughly classified as follows: 1) public utility and postal rate cases, 2) decisions of this Department suggesting that new rules may be given only prospective application, and 3) administrative rulings of other agencies that changed statutory interpretations which had been followed since the enactment of the statute.

In public utility cases, after a hearing is held and a rate determined, the regulator may not later, upon the same or additional facts existing when its previous order was promulgated, require reparations of the carrier by holding that the original rate was too high

[57] Appelless argue that since *Freeman* is so firmly entrenched in the mining law it may not now be overruled. Most of the case authority cited by appellees, however, supports the proposition that precedent may be overruled, but not applied retroactively. Since appellees have also argued at length that the *Freeman* proposition of prospective value is a "rule" which may only be changed prospectively, we assume that appellees do not mean to argue that *Freeman* may not be overruled at all, only that it may not be overruled in a retroactive manner.

and should be lowered. *Arizona Grocery Co.* v. *Atchison, T. & S.F. Ry.*, 284 U.S. 370 (1932). The postal rate cases involve situations tantamount to a contract. The carriers had transported mail at the request of the Postmaster General with the fair implication that payment would be made on the accustomed basis. After the mail had been transported, changes in the interpretation of the statutes were made which lowered the rates. The Court held that to apply the lowered rates would improperly deny the carriers the higher rates that they had received for like services in the past and which they had relied on in the instant cases in undertaking to transport the mail. *United States* v. *Alabama Great Southern R.R. Co.*, 142 U.S. 615 (1892); *Luckenbach Steamship Co.* v. *United States*, 280 U.S. 173 (1930).

Both the postal rate cases and public utility decisions are inapposite, since the carriers and utilities had been actively induced by the Government to rely on certain rates. Neither appellees herein nor their predecessors in interest were similarly induced by the Government to locate these claims or to invest in their purchase or development.

The decisions of this Department advanced by appellees are equally inapposite, since they all have two characteristics in common which are not present in this case: 1) they all involved changes from one rule to another, either of which could be considered "correct" within the meaning of the statute, and 2) the original rules were in effect at the time the entries were made. Most of the cases cited concern timber culture entries, where the rule in effect at the time the entries were

made was subsequently changed, requiring a longer time period before patent would be allowed. *Mary R. Leonard,* 9 L.D. 189 (1889). In that case it was clear that either the old or the new rule would be a permissible reading of the statute. Further, the entry was made when the old rule was still in effect. For similar holdings, *see Rough Rider and Other Lode Claims,* 42 L.D. 584 (1913), which dealt with a local rule regarding discovery, and *Instructions,* 52 L.D. 631 (1929), which concerned monumenting requirements for oil shale placer claims. In this case, however, the only rule in effect at the time these claims were located and on February 25, 1920, was the prudent man test of *Castle* v. *Womble, supra,* requiring present marketability.

The other line of cases cited by appellees involves administrative changes in the interpretation of a statute from an interpretation that had been followed since enactment of the statute. For example, in *Robertson* v. *Downing,* 127 U.S. 607 (1888), customs officals attempted to reinterpret a statute contrary to the interpretation instituted shortly after its enactment. The Court stated that where a statute has been interpreted in a particular way, that interpretation should not be disturbed except for "the most cogent and persuasive reasons." *Id.* at 613. *Freeman,* however, arose more than half a century after enactment of the mining law and more than 30 years after the promulgation of the prudent man test in *Castle* v. *Womble, supra.* Moreover, *Freeman* was and is a departure from the consistent interpretation of the law by the Department and the courts.

In *Linkletter* v. *Walker,* 381 U.S. 618 (1965), the Supreme Court dealt at some length with the considerations to be weighed in determining whether to limit the effect of overruling prior decisions to prospective application only. The precise question in *Linkletter* was whether the overruling of *Wolf* v. *Colorado,* 338 U.S. 25 (1949), by *Mapp* v. *Ohio,* 367 U.S. 643 (1961), should be given retroactive effect or confined to prospective effect only. *Mapp* overruled *Wolf* to the extent that *Wolf* had held the "exclusionary rule" relating to illegal searches and seizures did not apply to proceedings in state courts.[58] The basic considerations to be weighed are found in *Linkletter* and other cases, *e.g., Chicot County Drainage Dist.* v. *Baxter State Bank,* 308 U.S. 371, 374 (1940); *Great Northern Ry. Co.* v. *Sunburst Oil & Refining Co.,* 287 U.S. 358 (1932). Those considerations include (1) the nature of the reliance placed on the precedent by the parties, (2) the purpose of the statute or rule in light of public policy, (3) the harm to the parties who have relied on the precedent to their detriment, and, conversely, (4) the harm to either the government or to the public purpose.

Neither appellees nor their predecessors in interest could have relied on the Department's policy in 1920-1960 in locating the claims herein. The *Instructions* of May 10, 1920, were issued after oil shale was removed from location on February 25, 1920.[59] *Freeman* was not

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[58] The Supreme Court was careful to observe that there is no difference between civil and criminal cases in applying the doctrine of prospective application.

[59] Appellees would contend that the claimants could well have relied on previous departmental actions and pronouncements in

issued until September 30, 1927. Moreover, locating a claim requires only a minimal expenditure. Reliance

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locating these claims. They argue at great length that classification by the United States Geological Survey of the lands upon which the claims herein are located as valuable for oil shale in 1916 imputed value requisite to support a discovery thereon. However, the meaning of "value" in the 1916 classification order is quite different from value requisite for discovery under the general mining law. The Act of July 17, 1914, 30 U.S.C. § 121 *et seq.* (1970), upon which the 1916 classification was based, and its predecessors, the Acts of 1909 (35 Stat. 844) and 1910 (36 Stat. 583), reserved to the United States certain minerals (later interpreted to include oil shale) that are classified as valuable by the U.S.G.S., when the surface is conveyed under the nonmineral land laws. Included in the reservation in each Act is "the right to prospect for, mine and remove." Since, as the Department and the courts have consistently held, a demonstration of value for prospecting or further exploration is not a demonstration of value under the general mining law, "valuable" in the Act clearly did not mean that the deposits in the lands so classified would necessarily meet the test of discovery.

Similarly, the classification of lands as valuable for oil shale by the U.S.G.S. in 1916 was based on prospective value, the prospect that at some indefinite time in the future oil shale would become marketable. The standards by which the U.S.G.S. classified lands as valuable for minerals are found in its Bulletin No. 537, published in 1913, wherein it stated as to phosphate:

> "The purely economic considerations of accessibility, means of transportation, and nearness to market are highly important in the problem of establishing a commercial mine but are not involved in the classification of the land as phosphate or non-phosphate land." (G-101, p. 128.)

Another mineral included in the 1914 Act was potash. On page 137 of Bulletin 537, under the heading "Classification of Potash-Bearing Lands," it was stated:

> "* * * as investigation by the scientists of the Government bureaus reveals promising localities, these localities, if they involve public lands, will be withdrawn from entry until their value as sources of potash can be demonstrated or disproved."

The oil shale classification orders, covering lands in Colorado, Utah and Wyoming, all stated:

or no, location by itself involves no change of position. Nor did appellees rely on the *Freeman* policy in developing their claims, since they have not in fact developed them. This leaves the question of purchase.

The Shoup claims were quitclaimed to Karl Schuyler, Sr., in 1923. D. A. Shale, Inc., received title to such claims from Schuyler's widow, who inherited them in 1933 from her husband, and who, on July 6, 1960, incorporated D. A. Shale, Inc. Therefore, there is no evidence that D. A. Shale, Inc., or its predecessors invested more than a minimal amount in the purchase of the Shoup claims in reliance upon *Freeman* or otherwise. Although Shell Oil Company expended some $18,780 in perfecting title to and preparing patent application for the Mountain Boy claims before 1964, it did not purchase the Mountain Boy Nos. 1, 6 and 7 from Frank Winegar for $30,000 *after* initiation of the contest proceedings. Moreover, the Department had not patented an oil shale claim since 1960. Accordingly, Shell could not have reasonably relied on the Depart-

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"The oil shales * * * constitute an undeveloped source of petroleum * * * and it is now recognized as possible that these shales will prove equally important as a source of nitrogen.

* * * * * * *

In view of the high prospective mineral value of lands underlain by oil-shale deposits it is, of course, apparent that they should not be acquired under the nonmineral land laws." (Ex. G-99, pp. 3, 4, 6, 7, 10, 11.)

Clearly, the 1916 classification could not be relied upon as declaring that minerals in the lands reserved, if found in sufficient quantity, were sufficiently valuable to support a discovery. The value necessary to support discovery during 1916-1920 was present economic value.

ment's continued adherence to *Freeman* when it purchased the claims.

That appellees will suffer financial harm should the claims be invalidated does not justify the perpetuation of error in interpretation of the mining law and the consequent disposition of the public lands to those not otherwise entitled to receive them. Perpetuation of such error would serve neither the mineral law nor the public interest.

Even if appellees had relied on the Department's continued adherence to *Freeman* to their detriment, the purchase of mining claims without a reasonable prospect of present, profitable development is simply a speculative venture. Preventing the disposition and dissipation of the public lands on the basis of speculation on their possible future value is a most cogent and persuasive reason for refusing to follow the policy enunciated in *Freeman*. The Secretary of the Interior has plenary authority over the disposition of the public lands. *Cameron* v. *United States,* 252 U.S. 450, 460 (1920). The Secretary's duties as trustee of the public lands for the people of the United States

> * * * oblige him to see that the law is carried out, and that none of the public domain is wasted or disposed of to a party not entitled to it.
>
> *Knight* v. *United States Land Ass'n.,* 142 U.S. 161, 181 (1891). * * *

To allow such land to be removed from the public domain because unforeseeable developments might someday make the deposit commercially feasible can

hardly implement the congressional purpose in encouraging mineral development. *Foster* v. *Seaton,* 271 F.2d 836, 838 (D.C. Cir. 1959). The obligation of the Secretary requires that claims such as those herein, which are being held for speculative purposes in the hope that at some future date the necessary technology will develop to make extraction of oil from oil shale a profitable venture, should not be patented.

In a recent District Court case, *McDade* v. *Morton,* 353 F. Supp. 1006 (D.D.C. 1973), *aff'd per curiam,* (D.C. Cir., No 73-1520, March 12, 1974), it was held that the Department of the Interior is not estopped by a former interpretation of a statute, however long-standing, from correcting what it feels to be clearly erroneous. The District Court quoted with approval *N.L.R.B.* v. *Baltimore Transit Co.,* 140 F.2d 51, 55 (4th Cir. 1944), *cert denied,* 321 U.S. 795 (1944), which held:

> * * * An administrative agency, charged with the protection of the public interest, is certainly not precluded from taking appropriate action to that end because of mistaken action on its part in the past.

See also Automobile Club of Michigan v. *Commissioner of Internal Revenue,* 353 U.S. 180, 183 (1957); *United States* v. *California,* 332 U.S. 19, 39-40 (1947).

Appellees allude to *Ickes* v. *Virginia-Colorado Development Corp.,* 295 U.S. 639 (1935), and *Wilbur* v. *United States ex. rel. Krushnic,* 280 U.S. 306 (1930). The validity of certain oil shale claims was challenged

by the Secretary of the Interior for failure to perform certain assessment work. The Supreme Court held in both cases that the claims were "maintained" within the meaning of the savings clause, section 37, of the Mineral Leasing Act of 1920, 30 U.S.C. § 193 (1972). Both decisions suggested that failure to do assessment work gave the Government no ground for forfeiture, but inured only to the benefit of relocators. In *Hickel* v. *Oil Shale Corp.*, 400 U.S. 48 (1970), the Supreme Court concluded that *Krushnic* and *Virginia-Colorado* must be confined to situations which existed in those cases, *i.e.*, where there had been substantial compliance with the assessment work requirements of the mining laws, 30 U.S.C. § 28 (1970), so that "possessory title" of a claimant would not be disturbed on insubstantial grounds.

The issue of discovery was not joined in *Krushnic* or *Virginia-Colorado*. Thus, neither decision is pertinent to the disposition of the case before us. The mining claims herein were not challenged for failure to perform assessment work, but for lack of discovery of a valuable mineral deposit. Accordingly, we are not concerned with the assessment work requirements of 30 U.S.C. § 28 (1970), but with the question of discovery within the meaning of the mining laws. We hold that no discovery of a valuable mineral deposit has been established on the claims at issue herein.

Appellees' other arguments have been fully considered and are not persuasive. Since its inception the general mining law has been interpreted by this Department and the courts to require as a condition of dis-

covery that a mineral be presently marketable. Between 1920 and 1960 a different standard—possible future marketability—was applied to oil shale. Appellees contend the application of such standard was correct, but, if not, must continue to bind the Department. We reject both contentions. Application of such standard to oil shale was contrary to the mining law. Its continued application to oil shale is contrary to law and in derogation of the Secretary's responsibility as trustee of the public lands for the people of the United States.

Accordingly, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 CFR 4.1, the decision of Administrative Law Judge Dent D. Dalby is reversed, and Mountain Boy Nos. 6 and 7 placer mining claims, and Harold Shoup Nos. 1, 2, 3 and 4 placer mining claims are declared null and void.

NEWTON FRISHBERG
Chief Administrative Judge

We concur:

MARTIN RITVO
Administrative Judge

DOUGLAS E. HENRIQUES
Administrative Judge

APPENDIX F

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Office of Hearing Examiners
4209 Federal Building
Salt Lake City, Utah 84111

April 17, 1970

DECISION

UNITED STATES OF AMERICA, *Contestant* v. FRANK W. WINEGAR, *Contestee* SHELL OIL COMPANY, *Intervenor*	COLORADO 359, involving the Mountain Boy Nos. 1, 6 and 7 placer mining claims, situated in NE¼ Sec. 13; N½NW¼, SE¼NW¼. Lot 1 and Tract 105A Sec. 14; and E½SW¼, Lots 2, 3 and Tract 105B Sec. 14, T. 7 S., R. 97 W., 6th P.M. Garfield County, Colorado.
UNITED STATES OF AMERICA, *Contestant* v. D. A. SHALE, INC., *Contestee*	COLORADO 360, involving the K. C. Schuyler Nos. 2 and 3, and the Harold Shoup Nos. 1, 2, 3 and 4 placer mining claims, situated in the NE¼, and NW¼ Sec. 24, SE¼, NE¼, NW¼ and SW¼ Sec. 23, T. 7 S., R. 97 W., 6th P.M., Garfield County, Colorado.

STATEMENT OF THE CASE

The Colorado Land Office Manager issued, on behalf of the United States of America, two complaints dated September 8, 1964, alleging the invalidity of:

> The Mountain Boy No. 1 placer mining claim, consisting of the northeast quarter of section 13; the Mountain Boy No. 6 placer mining claim, consisting of the north half of the northwest quarter, the southeast quarter of the northwest quarter, lot 1, and Tract 105A of section 14; and the Mountain Boy No. 7 placer mining claim, consisting of the east half of the southwest quarter, lots 2 and 3, and Tract 105B of section 14, all in Township 7 South, Range 97 West, 6th Principal Meridian, Garfield County, Colorado; and
>
> The K. C. Schuyler No. 2 placer mining claim, consisting of the northeast quarter of section 24; the K. C. Schuyler No. 3 placer mining claim, consisting of the northwest quarter of section 24; the Harold Shoup No. 1 placer mining claim, consisting of the southeast quarter of section 23; the Harold Shoup No. 2 placer mining claim, consisting of the northwest quarter of section 23; the Harold Shoup No. 3 placer mining claim, consisting of the northwest quarter of section 23; the Harold Shoup No. 4 placer mining claim, consisting of the southwest quarter of section 23, all in Township 7 South, Range 97 West, 6th Principal Meridian, Garfield County, Colorado.

Both complaints contain identical charges that:

A. Valuable minerals were not found within the limits of the Claims on or before February 25, 1920, or subsequent to February 25, 1920, as a result of diligent prosecution of work leading to a discovery on February 25, 1920, and thereafter continued, so as to constitute a valid discovery within the meaning of the mining law.

B. If a valid discovery was made on or before February 25, 1920, or subsequent to February 25, 1920, as a result of diligent prosecution of work leading to a discovery on February 25, 1920, and thereafter continued, the discovery was subsequently lost and the lands within the claims reverted to and became a part of the vacant unappropriated public domain.

C. Valuable minerals do not now exist within the limits of the claims so as to constitute a valid discovery within the meaning of the mining law.

The complaint against the Schuyler and Shoup claims contained the additional charge that:

D. By additional or amended location certificates dated August 10, 1923, the boundaries of the claims were changed to include land which was not embraced within the claims on February 25, 1920, and to exclude land which had previously been embraced within the claims. The claims are null and void as to all lands that were not

> embraced within the claims on February 25, 1920, and are null and void as to all lands that were excluded from the claims by the additional or amended location certificates.

The complaints requested that the claims be declared null and void and the mineral entries be canceled.

On October 7, 1964, Contestee D. A. Shale, Inc., filed an answer to the complaint denying that the Schuyler and Shoup mining claims were not valid mining claims. Contestee Frank W. Winegar, having received an extension of time in which to respond, filed an answer to the complaint on November 9, 1964, denying that the Mountain Boy Nos. 1, 6 and 7 placer mining claims were not valid mining claims.

On November 9, 1964, the Shell Oil Company filed a motion to intervene because it had acquired the Mountain Boy claims by assignment from Contestee Frank W. Winegar. Permission to intervene was granted on the same date.

On February 24, 1967, Contestee Frank W. Winegar and Intervenor Shell Oil Company moved to amend the answer to the complaint against the Mountain Boy claims to include affirmative defenses. Contestee D. A. Shale, Inc., filed a similar motion for the Shoup and Schuyler claims on March 1, 1967. The motions to amend were granted on March 9, 1967.

Because of the identity of issues and the proximity of the claims, the cases were joined.

The hearing on the complaints and answers was commenced on June 20, 1967, at Denver, Colorado, and con-

cluded on October 13, 1967. A further hearing was held on November 20, 1967, at Salt Lake City, Utah. During the proceedings, the Contestant was represented by Messrs. Robert W. Mesch, Albert V. Witham, and Lowell L. Madsen, Office of the Solicitor, United States Department of the Interior. Contestee Frank W. Winegar and Intervenor Shell Oil Company were represented by Messrs. Fowler Hamilton, Richard W. Hulbert, Donald Morgan and John Lyon, Cleary, Gottlieb, Steen & Hamilton, New York, New York, and Mr. John B. Tweedy, Tweedy, Mosley & Young, Denver, Colorado. Intervenor D. A. Shale, Inc., was represented by Messrs. Clair M. Senior and Francis M. Gibbons, Senior & Senior, Salt Lake City, Utah.

The Contestant filed post-hearing briefs (in addition to prehearing briefs) on June 3, 1968, November 5, 1968, April 8, 1969, and July 10, 1969. The Contestees filed proposed findings of fact and a post-hearing brief (in addition to prehearing briefs) on June 3, 1968, November 5, 1968, and June 9, 1969.

THE ISSUES

The parties agreed that the issues to be determined are:

1. Whether there was a valid discovery of oil shale within the limits of any of the mining claims on or before February 25, 1920.
2. Whether, if a valid mining discovery was made with respect to any of the mining claims, the discovery could have been or has been lost and, in such event, the legal consequences.

3. Whether, if a valid timely discovery was made with respect to any of the mining claims and, if the land did not subsequently revert to the public domain as a result of a loss of discovery, any of the mining claims are, at this time, supported by a valid discovery.
4. Whether, if a valid timely discovery was made with respect to the K. C. Schuyler Nos. 2 and 3 and the Harold Shoup Nos. 1, 2, 3 and 4, all or any part of the claims are invalidated by reason of amendments to the location certificates made after February 25, 1920.
5. Whether the Government is applying or seeking to apply standards of discovery as to oil shale claims at variance with those enunciated in *Freeman v. Summers* or with those applied generally in past adjudications and, if so, whether the Government is precluded from so donig.
6. The legal effect of prior proceedings, if any, involving the mining claims, or any of them.

BACKGROUND

Geographic Distribution of Oil Shale

The contested claims were located for oil shale. Oil shale is a fine-grained, laminated, sedimentary rock containing solid organic material called kerogen which, upon destructive distillation, will produce a substantial amount of oil. The kerogen is derived from deposition of aquatic plants and smaller amounts of animal life in

lakes during various geological periods. Oil shale does not contain appreciable amounts of oil.

Oil shale was deposited in a wide span of the earth's geological history from the Cambrian to recent periods. Shale deposits that yield at least 10 gallons of oil per ton occur in all of the continents. There are both high and low grade oil shale deposits in Africa of late Paleozoic and early Mesozoic age. In the Stanley Basin of the Congo, extensive deposits of oil shale of Triassic age exist in beds that aggregate about 30 feet in thickness and yield more than 25 gallons of oil per ton. There are extensive deposits in China, Israel, Jordan, Syria, Siberia, Thailand, Burma and Turkey. The oil shale resources of Asia have been estimated at 70 billion barrels in deposits that yield more than 25 gallons per ton. Deposits occur in Australia and New Zealand. The known higher grade deposits are estimated to contain 280 million barrels oil equivalent.

In Europe there are substantial oil shale deposits in the Balkan Peninsula and adjacent area, France, Germany, Great Britain, Italy, Austria, Switzerland, Luxembourg, Russia, Spain, Portugal and Sweden. The recoverable oil shale resources of Europe are estimated to contain a total of more than 30 billion barrels, mostly in shales that yield more than 25 gallons per ton. In South America, oil shale deposits are known to exist in Argentina, Brazil, Chile and Uruguay. These oil shale resources are estimated to contain 50 billion barrels of recoverable shale oil.

In the United States, deposits of oil shale of varying nature and extent have been reported in the States of

Alabama, Alaska, Arkansas, California, Colorado, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Missouri, Michigan, Montana, Nevada, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, South Dakota, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin and Wyoming. A large fraction of shale deposits of the United States contain small amounts of organic matter which will yield from one to five gallons of oil per ton on destructive distillation. These rocks have not been considered as oil shale. In addition, some sandstones, siltstones and limestones contain solid organic matter which yield very small amounts of oil. Possibly half or more of the sedimentary rock areas of the country will yield a small amount of oil. Oil shale can, therefore, be subject to several definitions. One authority defines oil shale as organic-rich shale that yields at least 10 gallons (3.8) percent of oil per ton.[1]

The oil shales of highest concentration of organic matter are in the Green River Formation of Colorado, Utah and Wyoming and the Tiglukpuk Formation in Alaska. These are the only North American oil shales in the United States in the 25 to 100 gallons per ton range. The Green River Formation shales of this grade have been estimated to contain 600 billion barrels. The Tiglukpuk Alaskan shales of similar grade have been estimated to yield 250 billion barrels.[1]

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[1] G-97, pp. 3, 10-16; Tr. 3448, 3450, 3455.
The Contestant's exhibits are designated by the prefix "G" and the Contestee's by the prefix "C." "CFF" refers to the Contestee's Proposed Findings of Fact.

[1] G-97, p. 9.

The Green River Formation is considered by geologists to have been formed in an inland lake which, at one time, covered an area of some 16,000 square miles in the States of Colorado, Utah and Wyoming. The formation resulted from lake and stream depositions extending over a period of some eight to ten million years. During the course of the evolution of the Green River Formation, tuff beds were formed in localized areas from airborne volcanic ash. In some instances, fairly great thicknesses of tuff were deposited.[2]

The Mountain Boy Claims

The Mountain Boy Claims Nos. 1, 6 and 7 were surveyed in 1917 in 160-acre legal subdivisions. The location certificates were recorded February 6, 1918, showing location on January 8, 1918, by the same eight locators for each of the three claims.[1]

H. A. Quigley, one of the locators, was the moving or managing party in obtaining the location. Because of his mistaken view that the claims were forfeited due to lack of assessment work in 1918, relocation certificates were recorded January 1, 1919, showing the date of relocation as January 1, 1919, by eight locators, three of whom did not appear in the 1918 location certificates.[2] Seven of the locators conveyed their interest in the claims to Quigley by quitclaim deed dated January 17, 1920.[3]

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[2] Tr. 83, 86; CFF-1; CFF-10.

[1] G-70, abstract entries 9, 14, 15; C-311D; C-311M; C-311N, pp. 9, 11, 19; CFF-460; CFF-462; CFF-463.

[2] G-70, abstract entries 27, 32, 33.

[3] G-69; G-70, abstract entries 38, 39, 40; C-311N, pp. 9, 11; CFF-464; CFF-465; CFF-471.

In April 1920, Quigley conveyed the claims to Herbert N. Wright for $5 per acre.[4] The eight locators shared in the proceeds. Wright acquired the Mountain Boy claims, as well as others, as trustee under a business trust for 24 beneficiaries with power to develop patent, leases, or sell the claims. John T. Brierly succeeded Wright as trustee. The beneficiaries contributed $25,000 to the trust in 1920 and additional sums in subsequent years for assessment and patent work.[1]

Brierly filed a patent application for the Mountain Boy claims Nos. 1 through 8 on July 24, 1924. On November 7, 1924, the Mountain Boy application was "suspended pending completion of resurvey." On March 3, 1927, the resurvey plat was officially filed in the local land office. Publication of the patent application was completed on August 27, 1927. No "adverse claim" was filed.[2]

During 1924, 1925 and 1926, investigations of the Mountain Boy claims were conducted by two inspectors of the General Land Office. A complaint was issued on May 21, 1927, seeking cancellation of the entries. The complaint charged, among other things, that no discovery had been made on Mountain Boy No. 1. An answer denying the allegations of the complaint was filed on September 14, 1927.[3]

On January 17, 1928, an amendment to the complaint

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[4] G-70, abstract entry 44.

[1] C-311AA; C-311I, pp. 3, 4, 116; C-311M; C-311N, p. 10; CFF-472; CFF-473.

[2] G-29A, sheet 2 of Plat of Resurvey; C-311I; C-311J, p. 1; C-311T; Tr. 1096; CFF-480; CFF-481; CFF-482; CFF-484.

[3] C-311L; C-311N; C-311R; C-311S, p. 1; C-311CC, pp. 4, 5; CFF-485; CFF-487; CFF-488; CFF-489; CFF-492; CFF-546.

added the charge that the NE¼, W½NW¼, NW¼NW¼, NE¼SE¼ section 14, T. 7 S., R. 97 W., 6th Principal Meridian, was claimed, possessed and occupied in good faith by Walter H. Pritchard under the homestead laws and, except as to certain minerals, had not been abandoned or relinquished to the United States.[1]

At the request of the mining claimants, the case was determined without hearing on the basis of the record, including the confidential field reports. The Commissioner of the General Land Office issued a decision on June 4, 1934, finding that a discovery had been made on Mountain Boy No. 1. The decision left open the charge concerning the Pritchard homestead entry with the understanding that the mining claimant might submit a petition for reconsideration of the charge. On May 21, 1937, the patent application was rejected to the extent that it covered lands previously patented to Pritchard.[2]

By 1939, William R. Eaton had acquired ownership of the Mountain Boy claims through a quiet title proceeding. He died sometime prior to February 1, 1943. On September 24, 1945, the Commissioner of the General Land Office rejected the patent application "as a considerable time has expired since the final rejection of exchange application 051139 of William R. Eaton and no further action has been taken by or in behalf of the mineral applicant since such rejection."[1]

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[1] C-311W; CFF-490; CFF-491.

[2] C-311CC; C-311II; C-311JJ; CFF-493; CFF-499; CFF-501; CFF-502.

[1] G-70, abstract entries Nos. 63 and 64; C-311QQ; C-311RR, p. 2; CFF-508; CFF-510; CFF-514; CFF-516.

In 1956, Winegar undertook to purchase and confirm possessory title to the claims and to use due diligence to obtain patents for Shell. Shell agreed to buy the claims upon issuance of patent for $60 per acre and reimbursement of expenses up to $12,800. Winegar obtained title to the Mountain Boy claims and filed patent applications with the Bureau of Land Management on August 7, 1958. Shell purchased the claims from Winegar in 1964 for $30,000. Shell had previously, in 1962, obtained through Winegar the Pritchard homestead for $8,400.[2]

After a field examination, a Bureau evaluation engineer recommended in a report of December 14, 1959, that patents be issued for Mountain Boy Nos. 1, 6 and 7. Publication of notice of the application was effected and final proof submitted along with the purchase price. A final certificate was issued by the Bureau of Land Management on November 30, 1960. On March 21, 1961, the final certificate was approved for patent by R. W. Bennett, Minerals Adjudicator of the Bureau. The Colorado State Office, Bureau of Land Management, sent the application to the Director for issuance of patent. A patent was not issued. Instead, this proceeding against Mountain Boy Nos. 1, 6 and 7 was initiated.[1]

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[2] G-69; G-70; G-514, November 9, 1964 letter between Shell and Winegar; C-312R, p. 1; C-749; C-757; C-758; CFF-527; CFF-529; CFF-532; CFF-534; CFF-541.

[1] G-29A, Tract Book, p. 197; C-312E; C-312F; C-312G; C-312H; C-727; C-884, p. 1; CFF-535; CFF-537; CFF-538; CFF-540; CFF-545.

The Shoup and Schuyler Claims

The K. C. Schuyler Nos. 2 and 3 were originally located by eight individuals in 160-acre legal subdivisions on July 26, 1917. The location certificates were recorded on August 25, 1917. The Harold Shoup Nos. 1, 2, 3 and 4 were originally located by eight individuals in 160-acre subdivisions on September 29, 1917. The location certificates were recorded on October 27, 1917. New location certificates covering the Schuyler and Shoup claims were again recorded on January 21, 1919, showing the date of location as January 1, 1919.[1]

S. D. Crump acquired the Shoup and Schuyler claims and quitclaimed them to Karl C. Schuyler, Sr. on May 24, 1923. A week later Schuyler quitclaimed an undivided one-half interest to George A. Taff. On September 21, 1923, Schuyler and Taff filed "Additional or Amended Location Certificates" dated August 10, 1923, for each of the claims.[2]

The additional or amended location certificates attempted to change the K. C. Schuyler No. 2 from its original designation as the NE^4 section 24, to the $N^2N^2N^2$ sections 23 and 24; the K. C. Schuyler No. 3 from its original designation as the NW^4 section 24, to the $S^2N^2N^2$ sections 23 and 24; the Harold Shoup No. 1 from its original designation as the SE^4 section 23, to the N^2S^2 section 23; the Harold Shoup No. 2 from its original designation as the NE^4 section 23, to the $N^2S^2N^2$ sections 23 and 24; the Harold Shoup No. 3 from its

[1] G-28, pp. 142, 149, 150; CFF-341.

[2] G-28, pp. 107-113, 118, 119; CFF-341; CFF-342.

original designation as the NW¼ section 23, to the S½S½N½ sections 23 and 24; and the Harold Shoup No. 4 from its original designation as the SW¼ section 23, to the S½S½ section 23.

George A. Taff reconveyed his undivided one-half interest in the claims to Karl C. Schuyler, Sr., by quitclaim deed dated January 9, 1926.[1]

Karl C. Schuyler, Sr. died testate on July 31, 1933. The Shoup and Schuyler claims were distributed to the surviving widow who, on July 6, 1960, incorporated D. A. Shale, Inc. under the laws of the State of Colorado, to which possessory title to the claims was transferred. On September 29, 1960, D. A. Shale, Inc. filed an application for patent of the Schuyler and Shoup claims. The Contestant thereafter filed its complaint contesting the validity of the claims.[2]

STATUTORY PROVISIONS

Section 1 of the Act of May 10, 1872, 17 Stat. 91, 30 U.S.C. 22, provides:

> . . . all valuable mineral deposits in lands belonging to the United States, both surveyed and unsurveyed, are hereby declared to be free and open to exploration and purchase, and the lands in which they are found to occupation and purchase . . . .

Section 6 of that Act, 17 Stat. 92, 30 U.S.C. 29, states:

> . . . a patent for any lands claimed and located for valuable deposits may be obtained . . . .

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[1] G-28, p. 103; CFF-343.

[2] G-27; G-28; C-971, pp. 1, 2; CFF-344; CFF-346; CFF-347; CFF-440; CFF-443.

Section 1 of the Act of February 25, 1920, 41 Stat. 437, 30 U.S.C. 181, states:

> Deposits of . . . oil shale . . . and lands containing such deposits owned by the United States . . . shall be subject to disposition in the form and manner provided by this Act . . . .

Section 21 of that Act, 30 U.S.C. 241, provides:

> The Secretary of the Interior is hereby authorized to lease to any person or corporation qualified under this act any deposits of oil shale belonging to the United States . . . .

The Mineral Leasing Act of February 25, 1920, withdrew oil shale from appropriation under the mining laws, except as to valid mining claims existing on the date of the act.

OIL SHALE AS A VALUABLE MINERAL DEPOSIT

(Issues Nos. 1 and 3)

The Test of Discovery

The Contestant asserts that oil shale was not, prior to February 25, 1920, a valuable mineral nor has it since become so.

The test of the discovery of a valuable mineral deposit was laid down in the Secretary's decision in *Castle v. Womble,* 19 L.D. 455 (1894). There the Secretary stated (at p. 457):

> After a careful consideration of the subject, it is

> my opinion that where minerals have been found and the evidence is of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine, the requirements of the statute have been met.

This "prudent-man rule" has been approved by the Supreme Court on several occasions. *Chrisman v. Miller,* 197 U.S. 313, 332 (1905); *Cameron v. United States,* 252 U.S. 450, 459 (1919); *Best v. Humboldt Placer Mining Co.,* 371 U.S. 334, 335-336 (1963).

This test of a valuable mineral deposit is defined in more direct terms in *Deffebach v. Hawke,* 115 U.S. 392 (1885) as minerals "in such quantity as to justify expenditure to extract them" and, similarly, in *Davis v. Wiebbold,* 139 U.S. 507 (1891), as mineral "in such quantities as would justify expenditures in the effort to obtain it." In *Diamond Coal and Coke Company v. United States,* 233 U.S. 236 (1914), the Court defined mineral lands as lands containing "mineral deposits of such quality and in such quantity as would render their extraction profitable and justify expenditure to that end."

More recently, in *United States v. Alfred E. Coleman,* 390 U.S. 599 (1968), the Court approved the application of the "marketability test" as "an admirable effort to identify with greater precision and objectivity the factors relevant to a determination that a mineral deposit is 'valuable'." In that case the Court stated (at p. 601):

> We cannot agree with the Court of Appeals and believe that the rulings of the Secretary of the Interior were proper. The Secretary's determination that the quartzite stone did not qualify as a valuable mineral deposit because the stone could not be marketed at a profit does no violence to the statute. Indeed, the marketability test is an admirable effort to identify with greater precision and objectivity the factors relevant to a determination that a mineral deposit is "valuable." It is a logical complement to the "prudent man test" which the Secretary has been using to interpret the mining laws since 1894. . . . Congress has made public lands available to people for the purpose of mining valuable mineral deposits and not for any other purpose. The obvious intent was to reward and encourage the discovery of minerals that are valuable in an economic sense. Minerals which no prudent man will extract because there is no demand for them at a price higher than the costs of extraction and transportation are hardly economically valuable. Thus, profitability is an important consideration in applying the prudent-man test, and the marketability test which the Secretary has used here merely recognizes this fact.

The question is, then, whether as of February 25, 1920 and since, "a person of ordinary prudence would be justified in the further expenditure of his labor and means," on the contested mining claims, "with a rea-

sonable prospect of success, in developing a valuable mine" *(Castle v. Womble, supra),* and whether the product of the mines could be marketed at a profit *(United States v. Alfred E. Coleman et al., supra).*

Past Action as Measure of Prudence

A half-century has elapsed since these claims were first located. During that period a great amount of activity has occurred and substantial amounts of money have been expended in connection with oil shale. An analysis of that activity should disclose what expenditure by men of ordinary prudence would be justified and what reasonable prospects existed for developing a valuable mine.

The Contestees argue that the determination of what "men of ordinary prudence" would be justified in doing should be made "in the light of the perceptions of the time when the acts of location and discovery occurred."[1] They would prefer to have the judgment made on the basis of what men of prudence might then have believed important under the patterns of thought and business conduct followed at that time. In short, subsequent unforeseeable events or hindsight should not be considered. The Department has adopted the view that a mining claimant's acts or failure to act subsequent to an alleged discovery should be considered in determining whether expenditures to develop a profitable mine would be justified. Thus, a failure to expend money over a considerable period of time in an effort to develop a mine has been considered as evidence

[1] Contestees' Opening Brief, p. 29.

that the mining claimant regarded such expenditures as imprudent.

In *United States v. Ruddock, Metson v. O'Connell et al.,* 52 I.D. 313 (1927), the issue was whether the evidence of deposits of petroleum found by mining claimants prior to the withdrawal of the lands from mineral entry in 1910 was sufficient to constitute a valid discovery. The Department held that it was not, stating (at p. 322):

> Certainly the subsequent acts of the mineral claimants, in abandoning all further development, permitting the improvements to go to ruin or to be sold, the property to lie idle, the possession to be taken under the agricultural land laws, and in never resuming development work, are very persuasive that they entertained the same view as their superintendent as to the inadvisability of attempting to produce oil from the strata of oil sands reached in any of the wells.

In *H. Leslie Parker et al.,* 54 I.D. 165 (1933), the Department stated (at p. 170):

> . . . The evidence shows that the actual disclosures of oil or gas in the three first wells are negligible and inconsequential. The conduct of the claimants and their lessee thereafter convinces the Department that they were in no wise induced by what they saw or found in the Shannon sands to rely upon them as a discovery or to expend further time or money in the hope of developing therein oil or gas in commercial quantities.

In *Starks v. Mackey et al.*, 60 I.D. 309 (1949), the mining claimant alleged discoveries of oil before the lands were withdrawn from mineral entry under the Mineral Leasing Act of 1920. There the Department stated (at p. 313):

> No evidence at all was presented by Mrs. Starks to show that the shale encountered in the wells drilled on Blue Bird Nos. 12, 15, 18, and 19, has any value for oil. On the contrary, the fact that the shale is only 3 feet thick and is underlain by dirt indicates that the shale has no economic or commercial value. Certainly, if the minerals discovered on these claims were of sufficient value that a person of ordinary prudence would be warranted in the expenditure of further time and money to develop the claims, some effort would have been made to develop them during the years that have elapsed since the date of the alleged discoveries, February 11, 1920.

And in *United States v. Vernon O. and Ina C. White*, 72 I.D. 522 (1965), the Department stated (at p. 526):

> The incredibility of the appellants' contention that they have made a discovery is perhaps most clearly pointed out by the testimony they elicited from their own witnesses that in 1923 and 1924 there existed on the claims mineral deposits that could have been developed by a prudent person with a reasonable prospect of success (Tr. 97, 135-136, 204-205). If this were so, it passes belief that in the 38-39 years elapsing until the hearing appel-

> lants mined only 6 ounces of gold. How long were they going to wait before commencing a mining operation, and, more importantly, why were they waiting? The answer seems plain—that they have not yet found any values sufficient to warrant development.

In each of these cases, the Department considered events occurring subsequent to an alleged discovery or hindsight in arriving at its conclusions. The courts have approved.

In *Oregon Basin Oil & Gas Company v. Work,* 6 F.2d 676 (1925), the Court of Appeals for the District of Columbia Circuit held that the Secretary "properly considered" events occurring after the alleged discoveries in invalidating an oil and gas claim relocated in 1912, shortly before a withdrawal of the lands in 1914. The Court stated (at p. 678):

> . . . In reaching his decision the Secretary properly considered, not only the work actually done in 1912 and 1913, the fact that no further discovery was made or attempted prior to the application for patent, almost 9 years thereafter, that the oil from adjacent claims was subsequently discovered at a depth much greater than that of the deeper of appellant's two wells, and from formations found by the Secretary to have been wholly unconnected with the formations penetrated by the well of appellant, and all other surrounding circumstances.

In *Cameron v. United States,* 252 U.S. 450 (1920),

the question presented was whether the claim had been perfected by a valid discovery of a valuable mineral deposit prior to a withdrawal. The Supreme Court affirmed the Secretary's decision and quoted from it (at p. 457):

> The evidence wholly fails to show that there are veins or lodes carrying valuable and workable deposits of gold, silver, or copper, or any other minerals within the limits of the locations. Sufficient time has elapsed since these claims were located for a fair demonstration of their mineral possibilities. [Six years had elapsed from location date to hearing date.]

As the Department has stated in *United States v. Flurry*, A-30887 (March 5, 1968):

> . . . the most persuasive evidence as to what a man of ordinary prudence would do with a particular mining claim is what men have, in fact, done or are doing, not what a witness is willing to state that a prudent man would do.

Foreign Oil Shale Activity

Oil shale development in foreign countries stimulates interest in the possible development of Western United States shales and has relevance in determining what expenditures might prudently be made in the United States. Several of the foreign deposits have been commercially exploited.

Production of fuels from oil shale preceded the production from petroleum. Shale oil was first produced

in France in 1838. Subsequent oil shale operations were started in Scotland in 1850; Australia in 1865; Brazil in 1891; Germany in 1916; Sweden and Estonia in 1921; Spain in 1922; Manchuria in 1929; and South Africa in 1935. A number of these continued until recent years when they succumbed to economic pressures from the petroleum industry. Today, only the Estonian and Manchurian operations survive.[1]

In France, the shale oil industry grew until about 1864 when competition of imported petroleum caused a decline. The French Government, at least intermittently, provided support of one kind or another, such as imports duties on foreign petroleum or direct subsidies. In 1893, oil shale production was about 190,000 tons. By 1900, production reached 220,000 tons, increased to 500,000 tons during World War II, and then declined. The industry ceased in the early 1960's.[1]

The Scottish industry used oil shale, recovered by underground mining, which assayed generally in the range of 25 to 35 gallons per ton. After 1850, more than 140 companies and individuals engaged in oil shale ventures. By 1870, these were reduced to 51, and by 1910 only six companies remained. By 1920, the operations were consolidated under one parent company, Scottish Oil Ltd. The Scottish oil shale production in the early 1870's was approximately 500,000 long tons per year and reached 3,000,000 tons annually by 1910. Production thereafter gradually declined to essentially nothing in 1964.[2]

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[1] G-290, pp. 29, 39; C-479, pp. 109, 110, 111; C-1025; CFF-45.
[1] G-281, p. 15; G-290, pp. 25, 26; G-419, p. 50; C-1025, pp. 1, 2.
[2] G-290, pp. 29, 30, 32; G-419, p. 56, 57.

Oil Shale Activity in the United States

The oil shale industry in the United States started about 1850. By 1860 there were 53 companies producing oil by distillation of various bituminous substances, including oil shale. Natural petroleum was discovered at Titusville, Pennsylvania, in 1859 and the American petroleum industry came into being. This reduced the price of kerosene so much that oil shale operations became unprofitable. The plants were abandoned or adapted to petroleum refineries.[1]

Interest in oil shale revived in the 1910 to 1920 period and has continued to the present time.[2]

An examination of how prudent persons expended their means with respect to oil shale during this period will provide the guide in determining whether oil shale was, as of February 25, 1920, a valuable mineral. Because the evidence in this respect is massive, the examination is limited to some corporations and the Government, whose activities are directed by the composite judgment of experienced officers.

Robert M. Catlin, a businessman and a member of the American Institute of Mining and Metallurgical Engineers, between 1890 and 1915 purchased approximately 140 acres of oil shale land, leased approximately 480, and obtained an interest in 140 acres of unpatented mining claims. He visited Broxburn, Scotland, in 1901 to study the Scottish shale oil operation, and in 1914 began research and development with the Elko deposits. In 1915, a 100-foot shaft was sunk in his min-

[1] G-290, pp. 60, 61; C-419, p. 99; C-721, pp. 38-39; C-853, p. 151; CFF-288.

[2] C-721, pp. 39-45.

ing property. The following year he erected a 20-ton per day retort which proved unsatisfactory and was later dismantled. In 1917, he incorporated the "Catlin Shale Products Company" and transferred his oil shale land to the company for stock.[1]

In 1918, the company began the construction of eight 100-ton per day retorts which differed in design from the 1915 models. The retorts were in operation in May of 1919 and by July the new plant had produced 15,000 gallons of shale oil. A refrigerator plant, wax press, stills and agitator were added to the plant the latter part of 1919 and early 1920. Sometime later, probably in 1920, the Catlin Company's retorts were shut down. A third retort, 40 feet high and 12-½ feet in diameter, was constructed and put in operation in December of 1921. This retort was operated intermittently until October 18, 1924.[1]

In 1924, the shale oil products were offered for sale for the purpose of testing the market. The products apparently could not be marketed in competition with petroleum products. On December 23, 1930, the Company was dissolved. Its operation was admittedly experimental.[2]

The Oil Shale Mining Company was incorporated in

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[1] G-23, p. 101; G-722, Part 1, pp. 9, 10, 12, 17, 18; G-722, Part II, p. 30; G-724E; G-724G, Lease No. 4349; G-724I, pencil notes of R. M. Catlin, Sr.; G-724N, Deeds 276-F, 278-F and 384-F; CFF-57; CFF-58; CFF-105.

[1] G-722, Part I, pp. 19, 20, 43; G-724H, Catlin letter, May 19, 1919; G-724J, letters of October 13, 1919 and December 2, 1919; CFF-78.

[2] G-722, Part I, pp. 13, 40, 41; G-722B; G-724B; G-724J, letter by R. M. Catlin dated August 8, 1919.

Colorado on October 2, 1916, as a public stock company with a capitalization of $100,000. It acquired six mining claims about 15 miles west of DeBeque, Colorado. In 1916, the company built a bunkhouse and a cookhouse near the claims. In 1917, the buildings were moved to a new location and an externally heated, six to eight-ton per day batch-type Henderson retort, 18 feet high and 12 to 15 inches in diameter, and a tramway were constructed. By the end of 1918 or the early part of 1919 the company had six of these retorts, only one of which was assembled and operated on an experimental basis. By 1920, the company experimented with a continuous type of retort, invented by its superintendent, A. V. Young, which was subsequently abandoned.[1]

The company produced a few barrels of oil in 1920 and 30 barrels in 1921. Oil shale for the retorts was obtained from small pits on the claims during the period from 1917 to 1921. By 1926, the company lost its properties through attachments.[2]

The Monarch Shale Oil Company was incorporated in October 1919. The corporation acquired 240 acres of oil shale land, located about 13 miles northeast of DeBeque, Colorado. By April 1921, the company had erected a Ginet retort (named after its inventor and president, Joseph H. Ginet), 18 to 25 feet long and 3-½ feet in diameter, with a capacity of about 50 tons of shale per day. During 1921, the plant was operated on 11 or 12 occasions for short periods and produced

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[1] G-115, pp. 4, 6, 7, 14, 15, 20, 27, 40, 47, 114, 115, 130-133, 139; G-241, p. 30.

[2] G-115 pp. 28, 40, 113-118, 130; G-241, p. 30; CFF-57.

a total of 71 barrels of shale oil. The retort was "not run to any extent" during 1922 and was not operated at all during 1923. Some test runs were made in 1924. The shale for charging the retort was taken from a tunnel driven 75 feet into the side of the cliff above the plant.[1]

The Mount Logan Shale Mining and Refining Company was incorporated in Colorado in July 1917. It obtained seven unpatented mining claims located about five miles from DeBeque, Colorado, on Mount Logan. The company erected a plant in Western Colorado in 1918, using three Galloupe retorts of a 20-ton capacity per day. After test runs in 1919 and 1920 proved this retort to be unsatisfactory, the company erected a Simplex retort similar to the Galloupe. The Simplex was 21 to 30 feet long and about 3 feet wide with a capacity of about seven tons, producing 12 to 15 barrels a day. The company obtained its shale from a 100-foot tunnel into the cliff. The total cost of the plant was estimated at approximately $70,000. The corporation made some experimental runs of oil shale in 1920 and 1921. The company became defunct in October 1926.[1]

The Index Shale Oil Company was incorporated in Colorado in October 1920. It obtained possessory title to eight oil shale claims and equitable ownership in an additional 15 others. Index began constructing an experimental plant in 1920 about 15 miles northwest of

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[1] G-116, pp. 4-8, 14, 20, 48, 67, 70, 71, 80, 86, 93, 101, 106, 119, 120; C-212.

[1] G-61, No. 8; G-117, pp. 1, 7, 9, 10, 12, 15, 19, 20, 24, 31, 32, 34, 59, 61, 75, 89, 99-102, 118, 143, 145; G-168, p. 21; C-213, p. 326; C-455; C-457; C-959, pp. 31, 32; CFF-80, CFF-106.

DeBeque, Colorado, using the Brown retort invented by its largest stockholder, Harry L. Brown. The retort was 75 feet long, two and one-half feet in diameter. Experimental runs of oil shale indicated that changes in design and equipment were necessary. Additional equipment was added in 1926. In 1928 the company was in receivership. The corporation mined its shale from a tunnel driven 60 feet into the face of the cliff.[2]

The March Oil Company was incorporated in August 20, 1917, in the State of Colorado by a group of businessmen, including K. C. Schuyler. The company's mining property, consisting of about 2,400 acres of oil shale, was located three to four miles north of Grand Valley on Parachute Creek. In 1917 the company leased its mining claims to K.C. Schuyler who agreed to work the claims and to refine and dispose of oil shale and its products. In 1920 and 1921 Schuyler and George Taff, working for or in partnership with Schuyler, constructed a plant at a cost of $100,000. The plant consisted of some buildings and sheds, a one-and-one-half-mile tramway, crushers and engine. A retort was designed by Taff, ordered from a Wisconsin manufacturer, but never delivered. In mid-1921 a cable on the tram broke killing nine men. The plant was never completed.[1]

The Continental Oil Shale Mining Company was incorporated in Arizona in November 1920. The company

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[2] G-118, pp. 1, 2, 31, 47, 49, 51, 52, 53-130, 154, 155, 163, 165, 166, 167; G-642E, pp. 172-207.

[1] G-61, No. 18; G-125, pp. 10, 15, 19, 21, 22, 30, 43; C-972, Exs. No. 1, pp. 1, 2, No. 3, p. 1, No. 4, p. 7, and Nos. 10 and 12; C-973, p. 54; CFF-81; CFF-353; CFF-358; CFF-362.

obtained mining claims by merger with the Oil Development Company. In 1919, it constructed a plant, 20 miles north of Rifle, Colorado, on Piceance Creek, consisting of a bunkhouse, a residence for a superintendent, a blacksmith shop, a crusher, and a Colorado continuous retort, invented by two Denver engineers. The vertical retort was about 22 feet high and two feet in diameter, having a capacity of 50 tons of shale per day.[2]

Shell Oil Company became interested in oil shale by 1945. By August 1954, Shell had acquired 3,624 acres of oil shale property at a cost of $123,014.35. Shell continued to acquire oil shale lands. In 1965, it entered into an option to purchase the Cathedral Bluff claims in the Piceance Creek Basin. The options on these 21,000 acres specified a purchase price of $2,000 an acre. The total cost to Shell would be in excess of $43,000,000, including $1,000,000 as the cost of maintaining the option. In the span of 10 to 15 years, the price of oil shale lands to Shell had risen from 500 to 700 percent and in the two years prior to 1964 had risen as much as 250 percent. As of 1964, Shell's holdings consisted of 5,300 acres of fee property, options to purchase 3,300 acres of fee lands and options to purchase 24,400 acres of unpatented mining claims. During the period of acquisition of the oil shale claims, Shell made economic studies of the feasibility of ex-

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[2] G-61, No. 13; G-126, pp. 35, 44, 70, 71; G-168, p. 15; G-580, LL-4, p. 1-16; C-454, p. 4.

tracting and refining oil from oil shale, but has no current plans for mining and processing oil shale.[1]

Cities Service Company, through its subsidiary Empire Gas & Fuel Company, began locating oil shale claims in Sweetwater County, Wyoming, in 1918. By August 1923, the company asserted ownership in 48 claims, totaling 7,680 acres of oil shale land. The evidence does not indicate whether Cities Service Company presently asserts title to these early locations.[1]

In early 1951, Cities Service Oil Company, a subsidiary of Empire Gas & Fuel Company, acquired an option to purchase 8,300 acres of oil shale land at $50 per acre, which it exercised in 1953. Since 1952, Cities Service Oil Company has acquired about 10,000 acres of oil shale land in Garfield County, Colorado, at a cost of about $500,000. Other than the acquisition of oil shale properties, Cities Service Oil Company's activities have been limited to core drilling and testing of oil shale samples. The company has no program for the commercial development of oil shale.[2]

Standard Oil Company of California began investigating the possibilities of producing shale oil and refined products from oil shale in 1918. The investigation included geological examination of the oil shale in California, Nevada, Utah and Colorado, the "devices for utilization" of them, and an economic analysis of the possible profitability of doing so. Laboratory retorting

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[1] G-509, p. 31; G-514, pp. 31, 80, 81; C-741; Tr. 4815, 4816, 4844, 4848, 4916; CFF-318.

[1] G-636E, pp. 60, 111, 116, 129; G-636F, pp. 11, 16; CFF-11.

[2] G-636, pp. 7, 8, 9, 10, 12, 30; G-636F, pp. 18, 23, 24; CFF-314.

experiments were conducted in 1920 and from 1925 to 1928. In 1921, the company obtained a patent for its process of "hydroxination of oil shale" developed by its research. In 1925, the company made intensive studies on the extraction of oil from solids.[1]

Standard began the purchase of Colorado oil shale land in 1943. By 1954, it had acquired 39,736 acres of patented land, 8,057 acres of unpatented mining claims, and an option or a partial interest to 17,628 acres, for a total of 65,421 acres. The total cost of this acquisition was approximately $5,000,000. By 1967, the company's patented land totaled approximately 44,000 acres in blocks of sufficient size to support a commercial oil shale operation. The company is now one of the largest holders of patented oil shale land.[2]

Standard Oil Company of Ohio (Sohio) first became interested in oil shale in 1962. From 1964 through 1967 the company spent or obligated itself to spend $28,800,000 for acquisition of 43,631 acres of patented oil shale lands in the Green River Formation. In addition, the company holds interests in options which, if exercised, would entail additional investments.[1]

The Oil Shale Corporation (Tosco) interested Sohio in its retorting process. In September 1964, the two companies joined with Cleveland Cliffs Iron Company in a joint venture agreement and formed the Colony Development Corporation for the purposes, among

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[1] G-629C, pp. 4, 12, 13, 27-47, 68, 69, 75, 78, 97, 98; G-723, Part I, p. 57; C-567, p. 1; CFF-110.

[2] G-629, p. 28; G-629B; G-629D, p. 149; G-629E; CFF-311.

[1] G-604, pp. 8, 19-20; G-604A.

others, of building and operating a prototype plant to determine the economic feasibility of the Tosco II process, developing an experimental mine and making engineering and cost studies directed to the establishment of a commercial oil shale operation. Facilities, including a 1,000-ton per day prototype retort, were constructed and placed in operation in 1965. During its subsequent operations the plant produced over 50,000 barrels of crude shale oil. By June of 1966 sufficient prototype data had been obtained to enable a qualified engineer to make an order of magnitude estimate of the capital cost of a commercial plant. The estimate came out substantially higher than the studies made prior to the construction of the plant. A difference of opinion relative to the causes and solution of this problem developed between the joint venturers. Sohio and Cleveland Cliffs felt that the problems of reducing capital costs should first be solved, then the prototype redesigned and operated. Tosco wanted to operate the plant and solve the high capital cost problem simultaneously. The differences were solved in September 1966 by placing the agency company, Colony, on an inactive status, having Cleveland Cliffs continue the mining experiment for the joint accounts of the joint venturers, and permitting Tosco to continue operating the retort for its own account. If the project were successful, the joint venturers contemplated entering into a commercial operation. In accordance with the agreement, Sohio studied alternative processes for extracting oil from shale. In 1966 it agreed to an ex-

change of information with Union Oil Company after joint studies of Union's retorting process.[1]

Tosco holds an interest in over 30,000 acres of oil shale lands in Colorado and Utah acquired at a cost of about $10,000,000.[2]

Tosco's president testified that the company intends to have a commercial plant of approximately 53,000 barrels per calendar day "on stream" during 1970.[1]

Texas Oil Company (Texaco) began exploring the possibilities of oil shale in 1918, and began acquiring interests in the oil shale lands of the Green River Formation in 1927 through the acquisition of the California Petroleum Company and its subsidiary, the Colorado-Ventura Company. Since 1927, the company has acquired 29,000 acres of patented oil shale lands in Colorado and Utah at a cost of $1,500,000. From 1945 to 1947, Texaco made a refining study of oil shale for the Navy at its own expense. Beginning in 1957, after experimentation with other methods of extracting oil from shale, Texaco constructed and operated a pilot plant and developed its own "hydrotorting process for extraction of shale oil." The company has spent over $1,000,000 in oil research in the past 20 years.[2]

Mobil Oil Corporation's interest in oil shale began in 1940. A research program to evaluate the potential of shale as a source of oil was begun in 1943. A pilot plant was constructed at Paulsboro, New Jersey, and

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[1] G-604, pp. 24, 25, 26, 29, 37; G-604C; Tr. 5063; CFF-298.

[2] C-1065; CFF-316.

[1] Tr. 5069; CFF-328; CFF-332.

[2] G-642, pp. 20, 25, 26, 43-45, 51; G-642C, p. 41; G-642F; G-642G; CFF-313.

an experimental program was carried out between 1943 and 1945. Further research and study of oil shale was continued. Since 1965, the company has been conducting a research program at Anvil Points in cooperation with five other major oil companies which includes additional refining, economic and mining studies. Mobil has, since 1955, purchased oil shale lands of the Green River Formation. At the present time, it holds an undivided half interest in 24,591 acres of patented oil shale land, the entire interest in 10,131 acres of patented oil shale land, for which it paid approximately $3,000,000. It also holds an option to purchase 17,440 acres of unpatented oil shale claims and 330 acres of patented land which, if exercised, will cost an additional amount of approximately $1,800,000.[1]

Union Oil Company of California became interested in oil shale in 1920. Since 1920, the company has acquired an interest in 57,319 acres of oil shale land, of which 37,166 are patented, and a "surface only" interest in an additional 2,617 acres, at a cost of over $2,500,000. Beginning in 1924, Union conducted studies of existing oil shale processes, made analyses of oil shale samples and undertook an oil shale research program. Starting in 1944, it constructed and operated an experimental retort with a two-ton per day capacity. In 1948 it completed a scale-up model with a 50-ton per day capacity which was dismantled in 1956. Union spent a total of $438,000 on oil shale research from 1947 to 1954. On January 31, 1955, Union's Board of Directors approved a $5,000,000 expenditure for a two-

[1] G-633, pp. 8-10, 39, 40; G-633A; G-633B, p. 1; CFF-312.

year oil shale research project, which would include the erection of a demonstration plant in Colorado of one thousand tons per day capacity. The demonstration plant was started in 1955 and completed by May 1957. The plant was run intermittently into July 1958.[1]

Major Oil Shale Holdings

Oil companies and other business interests have become interested in the commercial prospects for oil shale development. In addition to expenditures for developing technology, many companies have acquired interests in land containing oil shale deposits in the Green River Formation. In the Piceance Basin, the major owners of either patented or unpatented oil shale claims, were, as of 1964:

A. *Large Oil Companies*

Cities Service Company
Continental Oil Company
Getty Oil Company
Gulf Oil Company
Humble Oil & Refining Company
Marathon Oil Company
Pan American
Pure Oil Company
Shell Oil Company
Sinclair Oil Corporation
Socony Mobil Oil Company, Inc.
Standard Oil Company of California

[1] G-625, pp. 14, 15, letter dated June 20, 1920; G-626, pp. 61, 92, 112-117, 222, 232; G-895; G-927, pp. 2-4; C-905; C-907, pp. 5, 6, Fig. 5; C-910; CFF-310; CFF-317.

Texaco, Inc.
Union Oil Company of California

B. *Major Group Holdings*
Dow Chemical Company
Doyle, et al.
Dutton
Eaton Shale Company
Energy Resources Technology Land Company
Gabbs Exploration Company
Kerogen
Massive Group
Oil Shale Corporation
Parachute Oil Shale Company
Ruth Group (Ertle et al.)
Savage Oil Shale Development Company
Sunset Group (Gabbs Exploration Company)
Texas National Petroleum Company
Wasatch Development Company [1]

Oil Shale Research by the United States Government

The United States Government conducted extensive oil shale research. A 1901 Government publication noted the occurrence of oil shales in Colorado and Utah. In 1913, efforts were started by the Government to determine the extent of the deposits and their oil potential. In about 1916, the Bureau of Mines began laboratory work on oil shale in Washington, D.C., and by 1919 laboratory facilities were operated in Utah. The work in Utah included standardizing methods of test-

[1] C-333, p. 5; CFF-309.
[2] G-419, p. 99; C-850; CFF-64.

ing, studying methods of assaying oil shale for commercially recoverable oil and ammonium sulfate, conducting retorting experiments on different oil shales and analyzing shale oils and other products manufactured by different retorting processes and refining the retorted oils to determine the commercial value of the refined products.[1]

In January 1920, the Bureau of Mines established, under an agreement with the State of Colorado, a laboratory at Boulder, Colorado. The following month small scale experimental studies, concerned primarily with fundamentals of oil shale retorting and yields and characteristics of shale oil products, were begun.[2]

In 1924, a Presidential Naval Fuel Oil Committee, appointed to study the problem of obtaining adequate supplies of fuel oils for the Navy, recommended that the Bureau of Mines determine the feasibility of oil shale as a source of shale oil. Congress authorized the construction of a pilot oil shale plant and during the four-year program appropriated more than $229,000 for the study. The Bureau erected two large-scale experimental retorts at Rulison, Colorado, the Pumpherston and the NTU and opended a quarry at Anvil Points to provide oil shale for the program. The oil shale mine and the retort were operated periodically from 1926 through 1929. The refining studies showed that the shale oil could be refined to acceptable prod-

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[1] G-419, p. 99; C-8, p. 70; C-276; C-717; C-850; CFF-64; CFF-93.
[2] C-330.

ucts, although less readily than conventional crude petroleum.[1]

In 1944, Congress passed the Synthetic Liquid Fuels Act (P.L. 290, 78th Cong., App. April 5, 1944; 58 Stat. 190, 30 U.S.C. 321 et seq.). The Act authorized the Secretary of the Interior to construct and operate demonstration and pilot plants to produce synthetic liquid fuels from oil shales, coal, agricultural and forestry products and other substances and to conduct laboratory research. The Bureau of Mines constructed a demonstration plant at Rifle, Colorado, which included two NTU retorts and opened an oil shale mine at Anvil Points. The retorts were first operated in May 1947.[2]

Other pilot plant operations were conducted. One was at Pueblo, Colorado, using a Hayes low temperature coal carbonization retort under a cooperative agreement with the Colorado Fuel and Iron Corporation and another at Wilson Dam, Alabama, using a Royster retort owned by the Tennessee Valley Authority. As a result of the experience gained in the operation of the retorts and study of other processes, a Gas Flow retort was designed by the employees of the Bureau of Mines in 1946 and 1947. A retort embodying the principles considered to have the best prospects of success and a pilot plant incorporating these features was built at Rifle, Colorado Later, another

[1] G-246, pp. 1525, 1533-1534; G-302, pp. 299, 307; G-438, pp. 1, 5, 6, 25, 27, 150; C-277, p. 60; C-284; C-286-289; C-383, letter dated June 5, 1924, from Secretary Work to Director, Bureau of the Budget, pp. 1, 2; CFF-256; CFF-257; CFF-258.

[2] G-139, p. 32; G-159.

retort, the Duel-Flow, was designed, constructed and operated. Originally, the authority of the Synthetic Liquids Fuel Act was limited to five years, but two amendments extended the period covered by the Act to a total of 11 years, ending in April 1959. During those 11 years about $82,000,000 was expended. Of this amount, nearly $22,000,000 was directly applicable to work on oil shale.[1]

Since the end of the Synthetic Liquid Fuels Program, research work by the Federal Government has continued at the Bureau of Mines Research Center at Laramie, Wyoming. The annual budget for this work for the past 20 years has been about $1,500,000.[2]

The foregoing is illustrative of the expenditures made by corporations and the Government in the promotion and development of oil shale.

Cost Studies

An objective of the Bureau of Mines programs at Rulison and Rifle, the Union Oil Company's demonstration plant and the Tosco-Sohio-Cleveland Cliffs operations, was to obtain data upon which an informed judgment could be made as to whether expenditures in an oil shale mine would be justified. Not until a commercially feasible mining and retorting process competitive with petroleum was developed could a prudent man expect to develop a profitable oil shale mine.

All of the cost studies indicated that oil shale was

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[1] G-139, pp. 37, 41-44, 47, 90, 91; G-159; G-467, p. i; C-545; CFF-308.

[2] Tr. 3472, CFF-308.

not competitive with petroleum. At the request of the Secretary of the Interior, the National Petroleum Council made a study in 1950 and 1951 of synthetic fuel costs, including synthetic fuels derived from oil shale and prepared a final report dated February 25, 1953. The Economic Subcommittee made estimates of the cost of producing gasoline from oil shale under various assumed conditions. These costs varied between 13.9 cents, where the hypothetical plant included no housing or community development, to 15.2 cents where the assumed operation included complete housing and community development, including housing for employees, housing for tradespeople, teachers, general community facilities comprising streets, utilities, schools, and commercial buildings. The Committee's reports stated that "neither of these cases [the minimum and maximum expenditures], however, is believed to represent the probable situation. In order to obtain an adequate stable labor supply at the minimum investment, it is the opinion of the Subcommittee that the housing program would approach that of [housing for employees and general community facilities]."[1]

Where only general community facilities were provided, the Economic Subcommittee determined the cost of producing gasoline from oil shale would be 14.7 cents per gallon. The cost included taxes and an assumed six percent return on invested capital. The average refinery price for gasoline in Los Angeles at the time of the study was 11.7 cents per gallon. In the final report of the National Petroleum Council's Committee on Syn-

[1] G-300; G-451, Appendix A1, Appendix I40-41; CFF-334.

thetic Liquid Fuels Production Costs, February 26, 1953, the committee stated that for each increase of one percent return on investment after taxes the gasoline costs from the single plant cases would be 1.3 cents per gallon. This ratio indicates the shale oil plant could, in 1951, have been operated at a slight profit. However, the committee concluded that a return of between 12 and 15 percent on total invested capital would be required in order to attract investment capital.[1]

The Bureau of Mines made a cost study in 1951. While the Bureau and the National Petroleum Council was "in good agreement on many points," there was wide diversion on some items. The Bureau estimated that "with a capitalization of 50 percent equity and 50 percent borrowed funds, and with all products selling at market values, the rate of return on equity capital would be 11.2 percent after interest charges and income taxes," and stated: "Although this return is less than the average return of the petroleum industry, as indicated by published figures, it is high enough to warrant serious attention." [2]

In 1965 and 1966 employees of the Bureau of Mines, augmented by outside consultants with backgrounds in mining, retorting and refining technology, cost engineering, marketing, economics and finance, prepared for use in this contest a cost analysis for commercial scale oil shale plants on the contested claims for the years 1915, 1918, 1919, 1920 and 1966. The primary purpose of the studies was to determine the prospective cost and

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[1] G-300, p. 9; C-451, p. 29, Appendix I40.

[2] G-459, pp. ii, iii; CFF-335.

profitability of a commercial oil shale installation at the selected points in time, based on the information available at that time, or on whatever assumptions would have been necessary and reasonable to one making such a study.[1]

The design for the period 1915-1920 included the production of 1,000 tons of oil shale per day in an underground mine, crushing the shale, a battery of Pumpherston retorts as used in the Scottish oil shale industry, and a refinery producing shale oil gasoline, burning oil, gas oil, residual fuel oil, coke and ammonium sulfate, as well as a railroad, housing for employees and supporting facilities.[2]

The design for the 1966 period required mining of 60,300 tons of oil shale per day in an underground mine, crushing the mined shale, retorting the crushed shale in retorts of the gas combustion type, and treating and refining the shale oil at preliminary facilities in Colorado and a refinery in St. Louis. The products of the operation would be petroleum gasoline, diesel fuel, coke, ammonia, LPG, gas and sulphur. The plant and related facilities were estimated to require a capital investment of approximately $185,000,000. The study showed the following yields after taxes.[1]

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[1] G-139, p. 182; G-290, pp. 143, 146, 172; G-665; G-666; G-667; Tr. 3126, 3263-3272.

[2] G-665, pp. 1-18.

[1] G-667; 1966 study, pp. 1-17, 51, Table 19; G-673; G-674; G-683; G-683A; Tr. 2348, 2353-2356; CFF-337.

Project	Book Yield on Equity	Book Yield on Net Plant	True Yield
1915	7.1%	8.8%	6.5%
1918	6.6	8.3	7.0
1919	3.0	3.7	3.5
1920	Neg.	Neg.	0.0
1966	11.3	15.1	9.84

The study indicated the following maximum payback periods:

Project	Years
1915	11.5
1918	10.7
1919	14.0
1920	18.8
1966	5.3

The various studies disclose that since about 1951 marketable products from oil shale of the Green River Formation could be produced in a commercial-scale installation at a profit. However, that profit would be too small to be competitive with petroleum or to attract prudent investment capital. In 1966 a minimum book yield of at least 14 percent after taxes, a true yield of at least 11 percent after taxes and a payback period of not less than 4.2 years would be required on typical new investment. For nontypical investment such as an oil shale plant, a higher rate of return would be required. Required book and equity yields during the 1915 to

1920 period would probably have been higher than in 1966.[1]

Profitability of an Oil Shale Mine

As previously stated, the test of validity is whether an investor in an oil shale mine as of February 25, 1920 and since, had a reasonable prospect for developing a profitable mining operation.

Many millions have been spent on oil shale since the revival of interest in this mineral in the early 1900's. But substantially all of the expenditures that could be considered prudent were for (1) research and development of a technically and economically feasible mining and retorting process, or (2) purchase of mining claims. Until a research program had demonstrated that shale oil could be produced at a cost competitive with petroleum, no prudent person would attempt to develop an oil shale mine. He would have no market for his product. The very fact that, in the more than half a century of interest in oil shale claims of the Green River Formation, not one profitable mine has been developed is a compelling reason for concluding that expenditure of money to that end would be imprudent. As the Department said in *United States v. E. A. Barrows and Esther Barrows, 76 I.D. 299 (1969)* (at p. 306):

> . . . the fact that nothing is done toward the development of a claim after its location may raise a

[1] G-683; G-683A; Tr. 2322, 2330, 2331, 2373, 2376, 2377; CFF-287; CFF-293—CFF-297; CFF-321—CFF-328.

presumption that the market value of the minerals found therein was not sufficient to justify the expenditure required to extract and market them. See *United States v. Everett Foster et al.*, 65 I.D. 1 (1958), *affirmed* in *Foster v. Seaton*, 271 F.2d 836 (D.C. Cir. 1959); *United States v. Alfred N. Verrue*, [75 I.D. 300 (1968)].

The Contestees argue that the money spent or obligated in the acquisition of oil shale claims, amounting to as much as $2,000 per acre, proves that oil shale was a "valuable mineral deposit" and, therefore, "open to exploration and purchase" under the mining laws. Oil shale claims derive their market value from the expectation that at some time in the future shale oil will become competitive with petroleum. Market value of a mining claim is not the test for discovery of a "valuable mineral deposit." The mineralization must be such, not to justify the purchase of the mining claim for possible future development, but to justify present expenditures with a reasonable prospect of developing a profitable mine. "To allow such land to be removed from the public domain because unforeseeable developments might some day make the deposit commercially feasible can hardly implement the congressional purpose in encouraging mineral development." *Foster v. Seaton*, 271 F.2d 836 (at p. 838) (C.A. D.C. 1959).

Patentability of Oil Shale Claims

If this were a case of first impression I would, for the foregoing reasons, find that both before and after

February 25, 1920, oil shale was not a valuable mineral deposit. But this is not a case of first impression. The Department has long since decided that oil shale is a valuable mineral subject to appropriation under the mining laws.

The Department published *Instructions* of May 10, 1920, 47 L.D. 548, which state (at p. 551):[1]

> Oil shale having been thus recognized by the Department and by Congress as a mineral deposit and a source of petroleum, and having been demonstrated elsewhere to be a material of economic importance, lands valuable on account thereof must be held to have been subject to valid location and appropriation under the placer mining laws, to the same extent and subject to the same provisions and conditions as if valuable on account of oil or gas. Entries and applications for patent for oil shale placer claims will, therefore, be adjudicated by your office in accordance with the same legal provisions and with reference to the same requirements and limitations as are applicable to oil and gas placers.

The last sentence of this quotation was modified by Departmental instructions of November 12, 1927, *Assessment Work on Oil-Shale Claims,* 52 L.D. 333, which again recognized the patentability of oil shale claims. Instructions issued by the First Assistant Secretary on May 7, 1929, entitled *Location of Oil Shale Placer Claims,* 52 L.D. 631, again recognized that oil shale is

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[1] CFF-139.

subject to appropriation under the mining laws. These instructions state, with respect to oil shale claims (at p. 633):

> As between the Government and the claimant where the latter has located his placer claim by legal subdivisions of surveyed land without actually marking of boundaries and in other respects has brought himself within the saving clauses of section 37 of the leasing act, in the view of the department he has complied with the Federal statutes, and has a valid claim within the meaning of that section.

Freeman v. Summers arose from complaints filed by Freeman (Contest 1490) and Standard Shale Products Company (Contest 1491) alleging the validity of their oil shale mining claims and the consequent invalidity of conflicting homestead entries. The First Assistant Secretary found the mining claims to be invalid for lack of discovery (decisions of December 20, 1924), denied petitions for rehearings (decisions of May 23, 1925), later granted a petition to reopen (decision of July 29, 1925), and consolidated the two contests.[1]

After rehearing, the Secretary of the Interior issued a decision on September 30, 1927 (52 L.D. 201) holding that the prudent man rule governed questions of discovery, and then concluded (at p. 206):

> While at the present time there has been no considerable production of oil from shales, due to the fact that abundant quantities of oil have been

[1] G-729, pp. 15, 30, 37-38; CFF-206.

> produced more cheaply from wells, there is no possible doubt of its value and of the fact that it constitutes an enormously valuable resource for future use by the American people.
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> It is not necessary, in order to constitute a valid discovery under the general mining laws sufficient to support an application for patent, that the mineral in its present situation can be immediately disposed of at a profit. . . .

Several other Departmental decisions have recognized the validity of mining claims located for oil shale. *Dennis et al. v. State of Utah,* 51 L.D. 229 (1925), accepted as valid the *Instructions* of May 10, 1920. *Emil L. Krushnic (On Rehearing),* 52 L.D. 295 (1928), states (at p. 297), "The sufficiency of exposures of oil shale on the claim to constitute a valid discovery is not questioned." *Smallhorn Oil Shale Refining Company and Frederick J. Crampton,* 52 L.D. 329 (1928), says (at p. 331), "But the department has long held that lands classified as valuable for oil shale as a source of petroleum and nitrogen were prior to the passage of the leasing act open to mineral entry under the mining laws. . . ." *Standard Shales Products Company,* 52 L.D. 522 (1928), states (at p. 523); "The Commissioner of the General Land Office has transmitted for approval . . . the opinion that mineral entry . . . to obtain patent to 69 oil-shale placers . . . should be clear-listed . . ." and concludes (at p. 527), ". . . the mineral entry should be clear-listed and patent should

issue. . . ." (See also *James W. Bell,* 52 L.D. 197 (1927); *Emil L. Krushnic,* 52 L.D. 282 (1927).)

In its administration of the mining laws, the Department has consistently recognized and followed the *Instructions* of 1920 and 1929 and the precedent established by *Freeman v. Summers.* The first oil shale mining patent was issued in 1920. Since then, and until 1960, 523 patents for 2,326 placer claims embracing 349,088 acres of oil shale lands in the Green River Formation have been issued.[1]

The Contestant has argued at length that the *Freeman v. Summers* decision was poorly conceived.[2] I agree. But a Hearing Examiner is as much bound by decisions with which he disagrees as by those he endorses. *Freeman v. Summers,* the other decisions cited, and the consistently followed *Instructions* of the Department compel a finding that oil shale is a valuable mineral subject to appropriation under the mining laws.

LOSS OF DISCOVERY

(Issue No. 2)

The Contestant contends that any discovery that might have been made upon the contested claims was lost subsequent to February 25, 1920. This contention is based upon the argument that from at least 1930 to at least the early 1940's no one spent time and money on oil shale in connection with prospecting, exploration,

[1] C-190, p. 61; CFF-131; CFF-196; CFF-197; CFF-246.

[2] Contestant's Post-hearing Brief and Appendix, pp. A-1153-A-1266).

research, experimentation or testing, thus demonstrating that prudent persons would not be justified in so doing.

The contention as to loss of discovery is answered by *Freeman v. Summers* and the past administrative practice of the Department in issuing patents for oil shale claims. The Department has consistently accepted *Freeman v. Summers* as authoritative and recognized oil shale claims as patentable throughout the 1930-1940 period. As previously stated, that decision is binding upon the Hearing Examiner.

A PHYSICAL FINDING OF OIL SHALE
(Issue No. 1)

Geology of the Claims

The Contestant asserts that each of the contested claims is invalid because the evidence fails to prove that a physical finding of oil shale was made within the limits of each of the claims on or before February 25, 1920, when the land became subject to disposition under the Mineral Leasing Act.

The claims involved in this proceeding are located in the southern portion of the Piceance Creek Basin adjacent to the Colorado River. They are approximately six miles north of DeBeque, Colorado, and about seven miles west of Grand Valley, Colorado. Conn Creek, approximately 2½ miles to the west, and Parachute Creek, approximately 2½ miles to the northeast, had eroded the area to form a peninsula upon which

the claims lie. The peninsula is defined by a very steep escarpment upon the east, south and west, with about 2,000 feet of relief between the top of the peninsula and the stream valleys below. The top of the peninsula, a plateau or mesa, includes most of the surface of the claims in contest.[1]

Mountain Boy No. 1 is on the east side of the peninsula. Mountain Boy Nos. 6 and 7 and Harold Shoup Nos. 3 and 4 form a row of 160-acre tracts running from north to south on the west side of the peninsula. Harold Shoup No. 1 is adjacent and east of Harold Shoup No. 4 and shares a common corner to the northeast with K. C. Schuyler No. 3. Harold Shoup Nos. 3 and 4 and K. C. Schuyler Nos. 3 and 2, in that order, form a row of 160-acre tracts running from west to east.

All of the claims are underlain by the Green River Formation.[2] In Colorado, the various members of that formation, in ascending order, are the Douglas Creek member, the Garden Gulch member, the Anvil Points member, the Parachute Creek member, and the Evacuation Creek member.[1]

The Douglas Creek member consists of sandstone and various types of limestone. It contains thin bids

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[1] G-11; G-38; G-39; G-46; G-59; C-609; C-722; C-813, C-815; C-874, p. 14; C-885, Mineral Report dated December 4, 1963, p. 1; Tr. 503, 505; CFF-378; CFF-381; CFF-448; CFF-449.

[2] "A formation is a body of rock characterized by lithologic homogeneity; it is prevailingly but not necessarily tabular and is mappable at the earth's surface or traceable in the subsurface." (Tr. 93)

[1] CFF-382; CFF-386; Tr. 101-102.

of oil shale and other gray shale and some siltstone. The Garden Gulch member consists of low-grade oil shale, limestone and some thin-bedded sandstone. The Anvil Points member consists of an abundance of sandstones interbedded with thin limestones, some low-grade oil shale and some siltstone. Except for some thin beds of tuff, the Parachute Creek member consists almost entirely of oil shale of varying quality.[2]

The Evacuation Creek member is the surface member over much of the Piceance Creek Basin in Colorado between the Colorado and White Rivers. It ranges in thickness from zero, where it has been entirely eroded away, to approximately 1,500 feet. The underlying Parachute Creek member in this area ranges from 500 to 1,500 feet in thickness. The contact or separation point between the Evacuation Creek member and the underlying Parachute Creek member in Colorado is drawn by modern-day geologists at the lower sandstone unit which is in a predominantly sandstone sequence of rock from that point to the surface. Because of the great variety of the lithologies occurring in the Green River Formation, it could not be considered as one massive homogeneous deposit of like material.[1]

The Parachute Creek member has been divided by one of the outstanding oil shale geologists into the upper and lower oil shale zone. The upper oil shale zone has been further divided or separated into units or beds. At the base of the upper oil shale zone the unit has been named the Mahogany Ledge. The Mahogany

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[2] Tr. 103, 104.

[1] Tr. 107-108, 109-110, 291-292.

Ledge contains two beds. One is the rich oil shale bed termed "The Mahogany bed," and the other is an analcitized tuff called the "Mahogany Marker." The Mahogany Marker lies a short distance above the Mahogany bed. The Mahogany Ledge contains the sequence of rich oil shale of commercial interest. It ranges in thickness from 40 to 90 feet, giving around 30 gallons per ton of shale oil, in the outcrop areas of the southern part of the Piceance Creek Basin. This is the area of the contested claims where the Mahogany Ledge is approximately 90 feet thick. The oil shale beds of the entire Parachute Creek member contain between 500 and 600 continuous vertical feet of oil shale that will yield an average of 15 gallons of oil per ton or better.[2]

The Evacuation Creek member is dominantly sandstone interbedded with units of marlstone which may or may not contain oil shale. The oil shales in the member are generally thin, low-grade and not very persistent. Some of the oil shales in the Evacuation Creek member might be traced over a hundred miles or so; other beds might be traced only a half mile or less. The surface of the plateau or mesa on which the contested claims are located is composed of the Evacuation Creek member.[1]

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[2] G-9; Tr. 112-113, 123-124, 145, 259, 525, 527, 1080, 1081, 3519, 3520; CFF-451.

[1] Tr. 103, 105-106.

Exposures on the Mountain Boy Nos. 6 and 7 and Harold Shoup Claims

The face of the escarpment cuts across Mountain Boy Nos. 6 and 7 and Harold Shoup Nos. 1, 2, 3 and 4 exposing several hundred feet of the rich upper oil shale zone of the Parachute Creek member. This exposure is easily viewable from the valley floor below the escarpment.[2]

The Contestant suggests that a factual finding of discovery on these claims should not be made because the evidence fails to show that prior to February 25, 1920, the locators went on the land, surveyed or otherwise determined the boundaries of the claims and recognized the outcropping as oil shale.

The rich oil shale strata of the Upper Oil Shale Zone can be seen in horizontal beds along the escarpment which extends for many miles through Western Colorado, including the three sides of the peninsula on which the claims are located. Mountain Boy Nos. 6 and 7 and Harold Shoup Nos. 1, 2, 3 and 4 have massive exposures of the oil shale of this zone which can be readily observed at a distance without going on the claims. At the time the claims were located, the geology of the Green River Formation and the location of the oil shale within the formation had been well publicized.

Acceptance of the Contestant's argument would require the assumption that the locators of these claims were completely uninformed on what was common

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[2] G-11; C-815; CFF-404; CFF-405; CFF-409; CFF-410; CFF-414; CFF-420; CFF-450; CFF-451; CFF-456; CFF-457..

knowledge among oil shale prospectors and that the massive exposure of oil shale on the claims was merely a matter of happenstance.

The logical assumption and the one here made is that the locators of Mountain Boy Nos. 6 and 7 and Harold Shoup Nos. 1, 2, 3 and 4 saw what was obvious and understood what they saw. A physical finding of oil shale was made on these claims at the time of location.[1]

Physical Finding on Mountain Boy No. 1

Mountain Boy No. 1 is not on the escarpment but "there is no dispute in the evidence that oil shale can at the present time be found outcropping within the limits of . . . Mountain Boy No. 1."[1] This exposed outcrop is about 10 feet south of the north line of the claim, projecting from the soil on the east side of a gulch. It is a part of the upper oil shale zone of the Parachute Creek member. It could have been observed by anyone running the north line of the claim. The outcrop is a part of a series of outcrops or exposures of oil shale that appear outside the claim running along the surface of a gulch about 1,300 feet in a northwesterly direction to the exposure of the Mahogany Ledge. Oil shale was also exposed in an excavation in the northeastern part of the claim. Consequently, the question is whether the natural outcropping was found by the locators or mining claimants prior to February

[1] CFF-467.

[1] Contestant's Post-hearing Brief, p. 50.

25, 1920, or whether the oil shale in the hole was exposed prior to February 25, 1920.[2]

There are two official reports of record dealing with the Mountain Boy No. 1; one of April 21, 1926, by Inspector G. M. Kintz, and the other of January 28, 1927, by Inspector Benjamin F. L. Haron. Kintz stated that hole No. 11 on Mountain Boy No. 1 "contains a fair grade of shale sufficient for discovery." Haron stated that his investigation corroborates the findings of Kintz that a discovery was made on Mountain Boy No. 1, but also stated that no assessment work was done prior to November 1920 when the claim was sold, and concluded that the discovery showing up in the hole was made either in the fall of 1920 or thereafter, which would be subsequent to the Mineral Leasing Act. Haron concluded that "the entire Mountain Boy Claim No. 1, is a nullity, no discovery ever having been made in law on this claim." These reports, therefore, disclose that a discovery in the excavation could not have been made prior to February 25, 1920.[1]

Other evidence bearing upon a physical finding of oil shale on Mountain Boy No. 1 consists of an April 10, 1920, affidavit by H. A. Quigley, the owner of the claims, stating that oil shale was discovered on each of the Mountain Boy claims; an August 7, 1923, affidavit of A. O. Maltby, that as a result of a number of tests made by him he "did prove to his entire satisfaction that in the years 1918 and 1919 that each and every one of said

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[2] G-11; G-12; G-17B; G-74A; G-75; C-609; C-815; C-885; C-886; Tr. 155-157, 173, 1101; CFF-452; CFF-453; CFF-454.

[1] C-311L, p. 5; C-311N, pp. 31, 112.

[Mountain Boy] claims contained deposits of oil shale which would produce not less than twenty-five gallons of oil per ton of shale;" a July 23, 1926, affidavit of C. H. Conwell, who posted the location notices on the claims, that a rough survey was made on the Mountain Boy claims and later an accurate survey, and that he picked up several samples of shale, some of which were later run and produced oil, but from which claims he did not recall; a July 24, 1926, affidavit of Albert Galyean, who performed assessment work on the claims in the fall of 1920, that "the two west claims are on the escarpment and show good shale, and he believes that oil shale was encountered in a hole on one other claim;" an October 25, 1926, interview with H. A. Quigley by an employee of the General Land Office in which Quigley stated that the discoveries were made by him from shale in place on the escarpment and from float on the other claims.[1]

The Conwell affidavit of July 23, 1926, has no evidentiary value in proving that a physical finding of oil shale was made on Mountain Boy No. 1 since it does not tie the samples which produced shale oil to any particular claim. The Maltby statement is also lacking in probative value. He did not present the facts that proved "to his entire satisfaction" that a discovery had been made in 1918 and 1919. His conclusion with respect to Mountain Boy No. 1 might have been based entirely on geological inference rather than on a physical finding of exposed oil shale. Galyean's statement

[1] G-828; C-311F; C-311H; C-311M.

merely purports to present the affiant's belief also without mention of any factual basis for that belief.

The probative evidence of a physical finding of oil shale is, therefore, reduced to the two Quigley statements; the affidavit of April 10, 1920, that he proved to his satisfaction that the Mountain Boy claims contained deposits of oil shale and the October 25, 1926, assertion indicating that float was obtained from claims not on the escarpment.

A finding of a piece of float material unconnected with any rock in place can hardly be regarded as the discovery of a valuable mineral deposit. The outcropping was not discovered by or known to Quigley else he surely would have relied upon the rock in place as proof of discovery, as he did with the claims on the escarpment, rather than the uncertainty of float. There is additional evidence that the outcropping of oil shale on Mountain Boy No. 1 was not discovered by the mining claimants. In the patent application submitted by Winegar in 1958, the point of discovery is designated at the hole or cut which was made after February 25, 1920, rather than the outcrop.[1]

The evidence does not establish that a discovery of oil shale was made upon Mountain Boy No. 1. Consequently, this claim is invalid.

Physical Finding on K. C. Schuyler Claims

K. C. Schuyler Nos. 2 and 3 claims are surfaced by the Evacuation Creek member of the Green River For-

[1] G-11; G-69; Tr. 833.

mation. The claims were examined in the early 1960's by Ralph G. Spengler, a geologist with the Bureau of Land Management, and John R. Donnell, a geologist with the Geological Survey. They discovered an exposure of oil shale on K. C. Schuyler No. 3, but nothing that could be recognized as oil shale on K. C. Schuyler No. 2. Donnell testified that there might be an outcrop or exposure of oil shale on K. C. Schuyler No. 2, but in his opinion such an occurrence was not probable.[2]

The outcrop on K. C. Schuyler No. 3 composed of the Evacuation Creek member. The exposure is on a slope covering a distance of about 100 feet in length and consists of alternating rich oil shales and less rich oil shales through a vertical sequence of approximately 40 feet. Samples were taken from this exposure by an employee of the Bureau of Land Management in October of 1961 and August of 1962, which assayed at 27.5 and 19 gallons per ton. The question here is whether the exposure on the K. C. Schuyler No. 3 claim was discovered by the locators or owners prior to February 25, 1920, or whether other physical findings of oil shale on either claim were made by them prior to that date.[1]

On August 10, 1923, K. C. Schuyler and George A. Taff, the then owners of the Schuyler claims, executed additional or amended notices of location by which they attempted to change the shape of the K. C. Schuyler Nos. 2 and 3 and the Harold Shoup Nos. 2 and 3 from

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[2] Tr. 272, 273, 376, 378, 381, 385, 387, 529, 533-535; CFF-390; CFF-392; CFF-393; CFF-398.

[1] Tr. 175, 268, 452, 453, 455, 456; CFF-398; CFF-399; CFF-400; CFF-402.

160-acre quarter sections to elongated rectangles one-eighth of a mile wide and two miles long, and the Harold Shoup Nos. 1 and 4 from 160-acre quarter sections to rectangles one-quarter mile wide by one mile long. This change would bring the outcropping of oil shale on the cliff face within the boundaries of the Schuyler claims.[1]

In a January 13, 1932 report pertaining to a contest proceeding against the claims, Oral J. Berry and Louis C. Mackel, employees of the General Land Office stated:[2]

> Amendments are often necessary in cases where the old survey does not conform to the resurvey and where errors have been made in staking the claims and work has been placed outside the original boundaries of the claims. There is no justification for the amendments of these placer claims as the old and new surveys practically conform. No amendment was necessary to show a valid discovery on the claims as the escarpment crosses several of the placer claims and rich strata of shale are exposed. On the other claims not on the escarpment they are trenched by draws which have eroded away the underlying sandstone and expose lean oil shale. The amendments were made after the date of the leasing act.

Berry and Mackel believed that lean oil shale was exposed on the Schuyler claims. However, in a memoran-

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[1] G-27; G-41.
[2] C-313, p. 37.

dum dated January 8, 1932, the District Law Office of the General Land Office stated:

> *Berry shows (page 37) some claims cover the rich deposits exposed on the escarpment, and some on top (K. C. Schuyler Nos. 2 and 3) have some showings of lean shale (page 37 of report). No tests of these shales were made by the examiners but verbally they state that while no samples were taken, possibly these upper shales may run about eight or more.* (Underscoring in text.)[1]

Berry's and Mackel's conclusion that the lean oil shale was exposed on the Schuyler claims was not supported by an analysis of samples from the claims. It was an unwarranted assumption based upon observation.

On May 16, 1927, M. H. Callahan advised an employee of the General Land Office that he had originally located and staked the Schuyler and Shoup claims and did not make a discovery on all of them and that after the date of the Mineral Leasing Act the claims were amended in order to secure exposures of oil shale on each and every claim.[1]

---

[1] C-313, p. 24; CFF-395; CFF-437.

There is a discrepancy in dates in Exhibit C-313. The Berry and Mackel statement is from a typewritten extract of a report. The exhibit gives the date of the report as January 22, 1932. The District Law Officer's memorandum is dated January 6, 1932, two weeks prior to the date given for the report. There can be no doubt, however, that the District Law Officer refers to the extracted material since he identifies the page number on which that material appears.

[1] G-805; CFF-439.

In the 1932 contest proceeding involving the Schuyler and Shoup claims and 18 Texas claims, Callahan testified (C-313):

According to the District Law Officer, Callahan later, in 1932, advised that Schuyler endeavored to get him to sign an affidavit that the claims in 1917 and 1919 were staked as amended in 1923 and not as the certificates of 1917 and 1919 described. Obviously, the owners of the Schuyler claims had not made a physical finding of oil shale on the claims prior to February 25, 1920, and attempted to validate them by filing additional or amended location certificates.[1]

Other evidence confirms this conclusion. In 1959, Irving P. Nielsen, a mining engineer and geologist, was employed by the owners of the Schuyler claims "to show where discovery might have been made on the two Schuyler claims." He apparently found the outcrop on K. C. Schuyler No. 3 and took three samples of rock from one point on the K. C. Schuyler No. 2. He was informed in a letter written by a Jack Miller (who was not further identified) that they assayed at 1.2, .96 and .6 gallons per ton.[2]

In 1961, Nielsen directed Ralph G. Spengler, a geolo-

Q . . . That shows, does it not, Mr. Callahan, that you had been prospecting for shale and taking samples prior to 1913?

A I sure had.

Q And your family knew about your shale activity, did they not?

A Yes, they knew that I was making shale oil. And I have in town . . . a bucket full of bottles of oil which was distilled and taken out of every claims . . . as a discovery.

It is not possible to tie this testimony to the K. C. Schuyler claims. Apparently the witness was referring to his activity prior to 1913.

[1] C-313, memorandum of District Law Officer, General Land Office, dated January 8, 1932, p. 2.

[2] C-970, pp. 20, 39, 40; CFF-394.

gist with the Bureau of Land Management, to the discovery point on the claim. They took a joint sample. Each piece of rock was broken in two. Nielsen took one of the divided samples and Spengler the other. An assay of the Spengler sample showed no oil. The Contestees did not introduce in evidence any assay of the Nielsen sample.[3]

The testimony of Nielsen as to the assay values of his 1959 samples, based upon hearsay, cannot be credited when he was unable to produce similar samples for an employee of the Bureau of Land Management. Even if it could, assays of rock of only 1.2, .96 and .6 gallons per ton could not support a finding that a valuable mineral deposit had been discovered. No reasonable definition of oil shale would include rock producing so meager an amount of oil. There is no showing that a physical finding of oil shale on K. C. Schuyler No. 2 has ever been made.

The outcrop on the K. C. Schuyler No. 3 was not known to the owners of the claims as of 1959, else it would not have been necessary to employ a geologist "to show where a discovery might have been made on the Schuyler claims."

K. C. Schuyler Nos. 2 and 3 claims are, therefore, void for lack of discovery prior to February 25, 1920.

RELOCATION AFTER 1920

(Issue No. 4)

The mining law permits the amendment of original locations of mining claims. If properly made, and no

[3] Tr. 465-470; CFF-391.

other rights have intervened, the amendment takes effect, by relation, as of the date of the original location. *Cheesman v. Shreeve,* 40 Fed. 787, 789 (D.C. Colo. 1889). An amendment may be made without the forfeiture of any rights acquired by the original location. *Bunker Hill & S.M. & Co. v. Empire State-Idaho M & D Company,* 134 Fed. 268, 270 (D.C. Ida. 1903). A pre-existing right inconsistent with the amendment may be lost to the extent of the inconsistency. *Smart v. Staunton,* 29 Ariz. 1, 239 Pac. 514 (1925); *Bunker Hill & S.M. & Co. v. Empire State-Idaho M & D Company, supra.*

The 1917 and 1919 locations describe the Schuyler and Shoup claims in Township 7 North, Range 97 West as:

K. C. Schuyler No. 2—NE¼ Section 24
K. C. Schuyler No. 3—NW¼ Section 24
Harold Shoup No. 1—SE¼ Section 23
Harold Shoup No. 2—NE¼ Section 23
Harold Shoup No. 3—NW¼ Section 23
Harold Shoup No. 4—SW¼ Section 23

K. C. Schuyler and George Taff executed an "Additional or Amended Location Certificate" for each of the claims, dated August 10, 1923. The amended certificates substantially describe the claims as:[1]

K. C. Schuyler No. 2—N½N½N½ Sections 23 and 24
K. C. Schuyler No. 3—S½N½N½ Sections 23 and 24
Harold Shoup No. 2—N½S½N½ Sections 23 and 24
Harold Shoup No. 3—S½S½N½ Sections 23 and 24

[1] G-28, pp. 107-113.

Harold Shoup No. 1—$N^{\frac{1}{2}}S^{\frac{1}{2}}$ Section 23
Harold Shoup No. 4—$S^{\frac{1}{2}}S^{\frac{1}{2}}$ Section 23

The K. C. Schuyler Nos. 2 and 3 and the Harold Shoup Nos. 2 and 3, as described in the amended location certificates, contain only 40 of the 160 acres described in the 1917 and 1919 location certificates. The amended location certificates for the Harold Shoup Nos. 1 and 4 describe only 80 of the 160 acres described in the 1917 and 1919 location certificates.

The Contestant contends that the changing of the boundary lines of the Shoup and Schuyler claims by the execution of the amended location certificate in 1923 resulted in an abandonment of the acreage in each of the claims not included within the amended locations. All parties agree that a requisite of abandonment is a matter of intention.[1]

The total area described in the 1917 and 1919 location certificates was included in the amended location certificates and no additional land was included. It is apparent from this fact alone that Schuyler and Taff did not intend to abandon any of the rights acquired by the original locations. This intent was expressed in the amended certificates:

> That for the purpose of more definitely stating and defining the boundaries of said Oil Shale Placer Mining Claim, and of curing and correcting any defects and errors in description of the same as the said oil shale placer mining claim is found to be

[1] Contestant's Answering Brief, p. 236; Contestees' Rebuttal Brief, p. 159.

described in the original location certificate, and as the said original location certificate is recorded in said records of said County Clerk and Recorder, and any failure fully to comply with the requirements of the law before filing the same, and without waiver of any right acquired by virtue of said original Location Certificate of the premises above described, or the original Location Certificate thereof, filed and recorded as above described, or the original Location Certificate thereof, filed and recorded as aforesaid, the said Karl C. Schuyler and George A. Taff do now make and file for record in the office of the said Clerk and Recorder, their amended and additional certificate of location of said Oil Shale Placer Mining Claim, in pursuance of, and in compliance with Section 3292, Complied Laws of Colorado of 1921.

Moreover, the 1923 location certificates, which attempted so drastically to alter the configuration of the mining claims, do not fit the intent of the law permitting amendments. In *Strepey v. Stark,* 7 Colo. 614, 620; 5 Pac. 111, 115, the Court stated:

> The evident intent of the statute is, that the additional certificate shall operate to cure defects in the original, and thereby to put the locator, where no other rights have intervened, in the same position that he would have occupied if no such defect had occurred. Such intent is in accord with the principle of all curative provisions of law.

There were no defects in the 1917 and 1919 location

certificates. They described with precision the area covered by the locations. The 1923 certificates did not change in any way the boundary lines outlining the total area covered by the claims. It is apparent, therefore, that the amended locations were not made for curative purposes, but rather, as has been found, to obtain exposures on each of the claims upon the escarpment. They were not, then, amended locations but, in fact, new locations. The facts in a particular case, not the recitations of a location certificate, determine whether it is an amended location or a new location. *Cranford v. Gibbs,* 123 Ut. 447, 260; Pac. 2d, 870, 871 (1953); *Cheesman v. Shreeve, supra.* Since no oil shale mining claims could be located after February 25, 1920, the amended locations of 1923 were simply invalid and ineffectual.

This same conclusion was reached by the Commissioner of the General Land Office in his decision of August 1, 1935, involving the contest proceeding against the claims when he stated:

> You [the Register of the General Land Office] were directed to advise the claimants that, as no location of lands valuable for oil shale could be made after the date of the leasing act of February 25, 1920 (41 Stat. 437), the amendments, which seek to include land within the claim which was not embraced therein on the date of said act, are in effect new locations as to such land and to that extent they were null and void and would not be recognized by this office.[1]

[1] C-313.

THE 10-ACRE RULE

The escarpment upon which the rich oil shale deposits of the Mahogany Zone are exposed crosses the Harold Shoup No. 3 mining claim. A portion of the claim lies upon the top of the mesa at an elevation of 8,400 feet above sea level. The elevation drops precipitously toward Conn Creek to an elevation of 7,000 feet. If the claim is divided into 10-acre subdivisions, 35.4 acres in six of the subdivisions lie below the exposures of the Mahogany Zone.[2]

The Contestant asserts that these 35.4 acres must be eliminated from the mining claims under the 10-acre rule before any patent is issued inasmuch as the lands are nonmineral within the contemplation of the mining laws.

The 10-acre rule was enunciated in the early case of *Ferrell et al. v. Hoge et al.*, 29 L.D. 12 (1899). There the Department stated (at p. 15):

> It would not comport with the spirit of the mining laws to hold that where a placer mineral deposit is discovered in any forty acre subdivision of the public lands, an association of eight persons is authorized to embrace in a mining location founded upon such discovery three other contiguous forty acre subdivisions of non-mineral land and to receive a patent for the same as a part of their mining claim, . . .

---

[2] G-11. There are approximately 60 acres in the six 10-acre subdivisions. However, approximately 25 acres on the western margin of the subdivisions have been patented leaving 35.4 acres in the six subdivisions.

The 10-acre rule is summarized in Vol. I, Sec. 5.26, of American Law of Mining:

> A single discovery may not hold all of the 20 or more acres located as a placer claim. Each 10-acre tract within the claim must be considered separately and any tract which is nonmineral may be excluded. This so-called *10-acre rule* has long been a precedent for placer claims. . . . (Emphasis in text.)

The Contestees claim the true test of mineral in character under the 10-acre rule is (a) whether there is oil shale within said tracts, and (b) whether land involved is more valuable for minerals than for agriculture.[1] This is not the test. The test of mineral in character for application of the 10-acre rule was recently restated in *United States v. Clare Williamson,* 75 I.D. 338 (1968). There the Department held (at p. 344):

> The test is that in order to establish the mineral character of land it must be shown that known conditions on the critical date (in this case, December 21, 1945 were such as reasonably to engender the belief that the land contained mineral of such quality and in such quantity as to render its extraction profitable and justify expenditures to that end. If they were not, the lands were not then known to be mineral in character and were not excepted from the effect of a withdrawal removing them from operation of the mining laws. See *Diamond Coal and Coke Co. v. United States,* 233 U.S.

[1] Contestant's Post-hearing Brief, p. 80.

236 (1914); *United States v. Southern Pacific Company et al.*, 251 U.S. 1 (1919); *United States v. State of California et al.*, 55 I.D. 121 (1935); *Southern Pacific Company*, 71 I.D. 224 (1964).

The relationship of the issue of mineral discovery to that of the mineral or nonmineral character of land was recently discussed in *State of California v. E. O. Rodeffer*, 75 I.D. 176 (1968). In that case we pointed out that the test of discovery and that for determining the mineral character of land are very similar but are not identical, and, while the issue of that case was substantially different from that involved here, the discussion of the relationship of the tests in that case is pertinent now.

As we noted there, the accepted standard for proof of a discovery is whether minerals have been found and the evidence is of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine. The most obvious difference between the two tests, we pointed out, lies in the fact that a discovery can be demonstrated only by the physical exposure, within the limits of the claim, of the mineral deposit on account of which the land is alleged to be valuable, whereas the mineral character of land may be determined from geologic inference or from other less conclusive evidence than is required to demonstrate a discovery. Beyond this difference in the degree of proof re-

quired to show the presence of a mineral deposit, there is little, if any, substantive difference in the two tests. That which is to be determined in either case is whether or not exploitation of the minerals is believed to be economically feasible. A review of early cases reveals that in many instances an identical test was employed whether the issue was discovery or mineral character. See, *e.g. John Downs,* 7 L.D. 71 (1888); *Walker v. Southern Pacific R.R. Co.,* 24 L.D. 172 (1897); *Cataract Gold Mining Co. et al.,* 43 L.D. 248 (1914), and cases cited.

In *Crystal Marble Quarries Co. v. Dantice et al.,* 41 L.D. 642 (1913), the Department, after holding that allegations that the land in controversy is "mineral in character" and is "more valuable for mineral than for agriculture" "are fully sufficient to apprise the homestead claimants of the nature of the case and to enable them to prepare their defense," outlined the required character of proof (at p. 646):

> Upon the trial of the case, however, it will be incumbent upon the company to establish the actual discovery or disclosure of mineral upon each 160-acre location, and that the area in conflict is *prima facie* mineral in character, containing placer mineral deposits. It can only succeed as to the area shown to be mineral in character, and for this purpose the land may be divided into 10-acre tracts. It is not meant that actual disclosure must be made on each 10-acre tract, but the suggestion is made merely to show that the contest may be sustained

> as to part of the land only. It is not deemed advisable at this time to go further into the question as to the character of proof.

Although the complaint contained the allegation that the land was more valuable for mineral than for agriculture, the Contestant was not required to prove this charge.

In *Davis v. Wiebbold,* 139 U.S. 507 (1891), the Supreme Court in determining lands which should be excluded from acquisition under the nonmineral lands law stated (at p. 519):

> The exceptions of mineral lands from preemption and settlement and from grants to States for universities and schools, for the construction of public buildings and in aid of railroads and other works of internal improvement, are not held to exclude all lands in which minerals may be found, but only those where the mineral is in sufficient quantity and to add to their richness and to justify expenditure for its extraction, known to be so at the date of the grant. There are vast tracts of country in the mining States which contain precious metals in small quantities, but not to a sufficient extent to justify the expense of their exploitation. It is not to such lands that the term "mineral" in the sense of this Statute is applicable.

And in *Diamond Coke & Coal Company v. United States,* 233 U.S. 236 (1914), the Supreme Court stated (at p. 240):

> To justify the annulment of a homestead patent as wrongfully covered mineral land, it must appear that at the time of the proceedings which resulted in the patent the land was known to be valuable for minerals; that is to say, it must appear that the known conditions at the time of those proceedings were plainly such as to engender the belief that the land contained mineral deposits of such quality and in such quantity as would render their extraction profitable and justify expenditures to that end. . . .
>
> We say "land known as at the time to be valuable for its minerals" as there are vast tracts of public land in which minerals of different kinds are found but not in such quantity as to justify expenditure in the effort to extract them. It is not to such land that the term "mineral" in the sense of the statute is applicable. . . .

The test of "mineral in character" for the application of the 10-acre rule established by these decisions is no different than that for discovery. The difference lies in the character of proof. For discovery purposes, a physical finding of mineralization is required while for application of the 10-acre rule the mineral character of land may be shown by geological inference.[1]

The mineral character of the 35.4 acres lying below the escarpment on Harold Shoup No. 3 can be determined by geological inference through projecting the data obtained from the core of a hole drilled by the

[1] CFF-184.

Shell Oil Company in section 10, Township 7 South, Range 97 West, which corners one of the Mountain Boy Claims.[1]

The columnar section of the 1,490-foot core shows four zones of oil shale, averaging 15 gallons of oil per ton, below the Mahogany Ledge and the lower part of the Parachute Creek member and one zone 18 feet thick yielding an average of 15 gallons of oil per ton. Other zones lying at lower elevations are 8 feet thick. Because of erosion the 18-foot zone of oil shale averaging 15 gallons of oil per ton would not be encountered below the surface of the six 10-acre subdivisions. Two of the 8-foot thick zones, average 15 gallons per ton, approximately 85 feet apart, underlie part or all of those subidivions [sic].[2]

There are over 8,000 square miles of the Green River Formation in the State of Colorado, Utah and Wyoming, believed to be underlain with oil shale over 15 feet thick that averages 15 gallons of oil per ton of material. Excluding the Sand Wash Basin in Colorado, which has not yet been appraised, there is approximately 1,300 square miles in that State that is believed to contain oil shale more than 15 feet thick that would yield an average of 30 or more gallons per ton of material. Estimates of oil available from shales assaying 25 gallons per ton and at least 15 feet thick in Utah and Wyoming are 120 billion barrels and 43 billion barrels respectively. In Utah, oil shales which have an assay above 15 gallons per ton that are at least 15 feet

[1] G-516; G-516A.

[2] G-516A; Tr. 286-287; CFF-385.

thick are estimated to represent 320 billion barrels of oil in place.[1]

The Mahogany Ledge which ranges from 40 to 90 feet in thickness in Colorado and from 20 to 60 feet in thickness in Utah with an overall average oil yield of 30 gallons per ton can be seen outcropping in the cliff faces over a distance of something in excess of 600 miles in Western Colorado and over a distance of in excess of 1,100 miles in Utah. A Government core hole in the area of the contested claims shows some 40 feet of oil shale in the Mahogany Ledge yielding an average of 30 gallons of oil per ton. This indicates an oil potential of a single 160-acre claim to be about 14 million barrels. This is less than the oil potential in other areas in the southern portion of the Piceance Creek Basin where the outcropping Mahogany Ledge is as much as 90 feet thick.[2]

With these vast deposits of rich oil shale available for exploitation, 8 feet of 15 gallons per ton shale deposits could not conceivably engender the belief that the 10-acre tracts contained mineral deposits of such quality and in such quantity "as would render their extraction profitable and justify expenditure to that end." (*Diamond Coke & Coal Company v. United States, supra.*) Nor would the land now qualify as mineral lands under the classification standards adopted March 8, 1957, by the Geological Survey and

[1] G-286, The Oil Shale Policy Problem, p. 21; Tr. 142, 143, 249; CFF-1; CFF-2.

[2] Tr. 3519, 3524, 3539, 3540.

used as a basis for reservation of mineral rights in dispositions of public land under the public land laws.[1]

Consequently, 35.4 acres in six 10-acre subdivisions are nonmineral in character and must be eliminated from the Harold Shoup No. 3 placer mining claim.

THE STANDARD OF DISCOVERY
(Issue No. 5)

The Contestees assert that Contestant is seeking to apply standards of discovery at variance with those enunciated in *Freeman v. Summers* or with those applied generally in past adjudications and is precluded from doing so.

I have found that the Contestant is attempting to apply standards contrary to *Freeman v. Summers* and that a Hearing Examiner is bound by this Departmental decision and other precedents.

THE EFFECT OF PRIOR PROCEEDINGS

As previously indicated, this contest is the second which has been brought by the Contestant against the validity of Mountain Boy No. 1. The May 21, 1927, complaint charged that "sufficient discoveries of oil shale were not made" on the Mountain Boy claims.[1]

The Commissioner of the General Land Office, by formal letter to the Register, dated June 4, 1934, found that:

As to charges 2 and 3, the report shows that a dis-

[1] G-98, p. 43.
[1] C-311R; CFF-488; CFF-489.

> covery was made on Mountain Boy Number 1 claim . . .

but concluded:

> However, action in this matter may be deferred pending final disposition of charge 8.[2]

The wording of the letter is ambiguous. The Commissioner, instead of making a direct finding of discovery, only states what is contained in a report and seems to defer final decision to some future date. However, by formal letter to the Register dated October 26, 1935, he dismissed Charge 8 and closed the contest, noting that the patent application for Mountain Boy Nos. 2, 3, 4, 5 and 8 had been rejected by the June 4, 1934 letter. By implication, the June 4, 1934 letter can be considered as a final ruling that a discovery had been made on Mountain Boy No. 1.[1]

The Contestees contend that the Department is bound by the finding of fact by the Commissioner of the General Land Office and may not relitigate the issue (Issue No. 6).

The question presented is whether administrative proceedings of the Department of the Interior involving public lands are, as a matter of law, subject to estoppel and *res judicata* so as to preclude modification or reversal by the Secretary of a final decision of the Director.

The doctrines of estoppel and *res judicata* are not universally applicable to administrative agencies. In

[2] C-311CC, pp. 4, 7; CFF-501.
[1] C-311FF; CFF-158.

National Rifle Association of America v. Young et al., 134 F.2d 524 (C.A. D.C. 1943), the Court stated that the question presented to the Court was whether the Unemployment Compensation Board was precluded from changing its prior decision made after hearing on the ground of estoppel or *res judicata*. The Court held (at p. 526):

> Though the doctrine of res judicata has been applied to administrative action of some sorts, it is clear that this judicial doctrine is not to be imported into all administrative proceedings. Administrative agencies are not bound by "the conventional judicial modes for adjusting conflicting claims," and "an administrative determination in which is imbedded a legal question open to judicial review does not impliedly foreclose the administrative agency, after its error has been corrected, from enforcing the legislative policy committed to its charge."
>
> The Superior Court was dealing in the case quoted with an administrative error which had been corrected by the court, but the principle is broader than the instance. What errors administrative agencies themselves may correct depends ultimately upon the balance of conflicting considerations. It is always desirable that controversies be settled quickly and finally, but it is also desirable that they be settled correctly. (Footnotes omitted.)

The authority of the Secretary to modify or change previous decisions has long been recognized by the

courts. In an early case, *Knight v. U. S. Land Association,* 142 U.S. 161 (1891), a decision had been made by the Commissioner of the General Land Office from which no appeal had been taken. The Secretary of the Interior nevertheless sent for the case and after review reversed the Commissioner. The Supreme Court, answering an argument that the Secretary had no authority to so act, stated (at p. 181):

> It makes no difference whether the appeal is in regular form according to the established rules of the Department, or whether the Secretary on his own motion, knowing that injustice is about to be done by some action of the Commissioner, takes up the case and disposes of it in accordance with law and justice. The Secretary is the guardian of the people of the United States over the public lands. The obligations of his oath of office oblige him to see that the law is carried out, and that none of the public domain is wasted or is disposed of to a party not entitled to it. He represents the government, which is a party in interest in every case involving the surveying and disposal of the public lands.

This same principle was reaffirmed in a later decision by the Supreme Court in *West v. Standard Oil Company,* 278 U.S. 200 (1929). This was an action brought by Standard Oil to enjoin the continuation of administrative proceedings in the local land office. The question involved was whether a particular area in California was known to be mineral in character in 1903,

the date of approval of a survey by the Department. If the land was not then known to be mineral in character, title to the land passed to the State of California under an act of Congress and through California to Standard Oil. The Department of the Interior had initiated an administrative proceeding to determine the question in 1921. The Secretary of the Interior ordered the proceedings dismissed. A successor Secretary reinstated the proceedings and was enjoined from proceeding by the lower court. In reversing the decision below, Justice Brandeis stated for the Court (at p. 210):

> If at the time of Secretary Work's order the Department still had jurisdiction of the land, he possessed the power to review the action of his predecessor and to deal with the matter as freely as he could have done if the dismissal of the proceedings had been his own act or that of a subordinate official. For, so long as the Department retains jurisdiction of the land, administrative orders concerning it are subject to revision. *New Orleans v. Paine,* 147 U.S. 261, 37 L. ed. 162, 13 Sup. Ct. Rep. 303; *Beley v. Naphtaly,* 169 U.S. 353, 364, 42 L. ed. 775, 779, 18 Sup. Ct. Rep. 354; *Lane v. Darlington,* 249 U.S. 331, 63 L. ed. 629, 39 Sup. Ct. Rep. 299; *Parcher v. Gillen,* 26 Land Dec. 34; *Aspen Consol. Min. Co. v. Williams,* 27 Land Dec. 1. Compare *Louisiana v. Garfield,* 211 U.S. 70, 75, 53 L. ed. 92, 96, 29 Sup. Ct. Rep. 31.

Other cases to the same effect are cited in *State of Wisconsin et al.,* 65 I.D. 265 (1958).

As the Court stated in *West v. Standard Oil Company, supra,* the Secretary may reconsider and revise decisions so long as he retains jurisdiction of the land. The Secretary may not reconsider a matter previously decided when title or a right in the land has vested in a claimant under the public land laws either as a result of the issuance of patent (*Iron Silver Min. Co. v. Campbell,* 135 U.S. 286 (1890), by operation of law (*West v. Standard Oil Company, supra*), or by grant of a license, easement, or right-of-way (*Chapman v. El Paso Natural Gas Company,* 204 F.2d 45) (C.A. D.C. 1953)).

CONCLUSION

The Mountain Boy No. 1 placer mining claim and the K. C. Schuyler Nos. 2 and 3 placer mining claims are null and void and the mineral entries are canceled.

The Mountain Boy Nos. 6 and 7 placer mining claims and the Harold Shoup Nos. 1, 2, 3 and 4 placer mining claims are valid and, upon approval of a proper application, patents may issue except for 35.4 acres of non-mineral land in Harold Shoup No. 3.

CONTESTEES' PROPOSED FINDINGS OF FACT

The Contestees filed 549 Proposed findings of Fact. The material portions of the proposals have, in substance, been found in the body of the decision and identified in the footnotes. The remaining proposed

findings are denied as being immaterial or not supported by the evidence.

/s/

Dent D. Dalby
DENT D. DALBY
Chief Hearing Examiner

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OCTOBER TERM, 1978

No. 78-1815

CECIL D. ANDRUS, Secretary of the Interior,
PETITIONER

v.

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30 U.S.C. 193 3

IN THE

Supreme Court of the United States

OCTOBER TERM, 1978

No. 78-1815

CECIL D. ANDRUS, Secretary of the Interior,
PETITIONER

v.

SHELL OIL COMPANY AND D. A. SHALE, INC.

Brief of State of Utah as Amicus Curiae

I. INTEREST OF STATE OF UTAH AS AMICUS CURIAE

Utah owns certain lands containing oil shale deposits, and has also selected 157,000 acres of the public domain in Utah, believed to contain oil shale deposits, as school indemnity lands. This Court has granted certiorari to review the legal effect of these school indemnity selections in *Andrus v. State of Utah,* U.S.S.C. No. 78-1522 (October Term, 1978).

The state-owned lands and the school indemnity selections are, for the most part, blanketed by old oil shale placer claims. If those claims are determined valid, Utah will have little or no proprietary interest in the oil shale resource. If, on the other hand, it is determined that these pre-1920 claims were not located pursuant to discovery of a valuable mineral deposit within the meaning of the general mining laws, Utah's proprietary interest in this resource will be protected.

II. QUESTION PRESENTED

Whether Congress, through inaction, has amended the general mining laws to exempt oil shale mining claims from the discovery requirements of the general mining laws.

III. INTRODUCTION

The Secretary of the Interior, through the Solicitor General, has petitioned this Court for a writ of certiorari to the United States Court of Appeals for the Tenth Circuit to review that court's opinion, reported at 591 F.2d 597 and appended to the Secretary's petition at pp. 1a-20a.

Utah filed an *amicus curiae* brief in the circuit court in support of the position advocated by the Secretary, and now files this brief in support of the Secretary's petition for a writ of certiorari.

The Mineral Leasing Act of February 25, 1920, ch. 85, 41 Stat. 437, 30 U.S.C. 181 *et seq.*, withdrew certain minerals, including oil shale, from location under the general mining laws and made them subject to disposition only through leasing. However, shortly before the Mineral Leasing Act was passed, there was a great deal of interest in oil shale potential, and a great number of placer claims were filed in Colorado, Utah and Wyoming[1]. Claims filed before the effective date of the leasing act could be main-

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[1] In *Hickel v. Oil Shale Corp.*, 400 U.S. 48, 54 (1970), the court provided the following explanation:

> It appears that shortly before 1920 oil shale claims were affected by a speculative fever. Then came a period of calm. By the late forties and continuing into the sixties speculators sought out the original locators or their heirs, obtained quit-claim deeds from them, and thereupon eliminated all other record title-holders by performing assessment work for one year. It appears that 94 of the 98 claims involved in the present litigation were of that character. There is nothing reprehensible in the practice, if the procedure is one which Congress has approved.

tained and perfected in accordance with the laws under which they were initiated. 30 U.S.C. 193.

For approximately forty years the Department of Interior followed the administrative decision in *Freeman v. Summers,* 52 L.D. 201 (1927), which held, in effect, that oil shale deposits constituted an "enormously valuable resource for future use" and they were therefore valuable mineral deposits so as to constitute valid discovery under the general mining laws, even though at the time of location a prudent man would have known that there was no reasonable prospect for present mining and marketing of oil shale at a profit. The prospect for profitable extraction was speculative and dependent upon future technology and market conditions.

The genesis of this litigation was in 1964 when the Secretary initiated administrative proceedings contesting the validity of certain oil shale placer claims on the ground, *inter alia,* that there had been no valid discovery. Without detailing all of the events which transpired between then and now, it is sufficient to say that the court below conceded that the oil shale placer claims did not meet the discovery requirements of the general mining laws as applied to other minerals, but that, nevertheless, congressional awareness of the Department's forty-year practice was effective to amend the general mining laws, without amendatory legislation, to carve out a special exemption for oil shale placer claims.

IV. REASON FOR GRANTING THE WRIT

A. *No Judicial Precedent for Amendment of Statutes Through Congressional Inaction*

The decision of the court below is without precedent in holding that congressional *awareness* of an erroneous

administrative interpretation of a statute may actually *amend* the statute to conform with the administrative interpretation. No other case, to our knowledge, has held that statutes may be amended by congressional inaction.

This is not a matter of judicial deference to a reasonable administrative interpretation of an ambiguous statute. Nor is it a matter of judicial recognition of congressional acquiescence in an administrative interpretation of a statute as a guide to the interpretation originally intended by Congress. No, it plainly and simply is a matter of the lower court declaring that Congress can amend legislation without amendatory legislation.

The lower court's rationale is easily illustrated by brief extracts from the opinion. First, the court frankly acknowledged that the "discovery" test historically used by the Interior Department to determine the validity of oil shale placer claims was contrary to the mining laws:

> Under the mining laws, Act of July 4, 1866, Act of May 10, 1872, and Act of June 22, 1874, now generally 30 U.S.C. §22, public lands of the United States not withdrawn from entry and containing valuable mineral deposits are open for location with some exceptions not here concerned. Nonmineral entries cannot be made on public lands deemed valuable for minerals. 30 U.S.C. §23 relates to lode claims and §35 provides that placer claims should be located under like circumstances and conditions and upon similar proceedings as are provided for lode claims. For lode claims there must be a discovery of a vein or lode and also a discovery of a valuable mineral deposit. For a placer claim there need only be a discovery of a valuable mineral deposit. We are here concerned with placer claims located for oil shale before the Mineral Leasing Act of 1930, 30 U.S.C. §181.

> *Everything considered, it must be concluded that the "valuable mineral deposit" standard or requirement was not met as to oil shale claims of the type here considered before 1920 as the standards were applied to the metallic minerals.* (Secretary's Petition, p.3a; emphasis added).

After reviewing various events which revealed that Congress was aware of the Interior Department's administrative treatment of oil shale mining claims in a manner not authorized by existing mining laws, the lower court said this "unique situation" caused the Department's practice to "become part of the mining laws and properly so."

> Thus we have what appears to be a unique situation where Congress made an intense investigation into Interior's interpretation of the mining laws as to a very specific and narrow circumstance, and approved it. This indeed bears no resemblance to the many Congressional silence cases, and removes any uncertainty as to whether the matter actually received attention, and also constitutes an express determination that the practice had indeed become part of the mining laws and properly so. (Secretary's Petition, p. 12a).

The lower court then flirted repeatedly with the "congressional reenactment" doctrine, sometimes distinguishing it and sometimes relying on it. The following quotations illustrate this waffling:

> We must hold that the Department is not free to so change the application of the general mining laws as to the oil shale locations here under consideration. The different treatment afforded all oil shale claims as to the "valuable mineral deposit" element of a location became a part of the general mining laws by reason of its adoption and approval by both Houses of Congress during the intensive investigations of this

very question and their affirmative resolution of the issue. The general mining laws were thus adjusted to accommodate the then very important practical and legal problem.

We do not put this in the category of Congressional reenactment after an administrative interpretation. There are, of course, a large number of cases in a variety of circumstances which relate to reenactments. As indicated, we are of the view that the circumstances here present take the case far beyond the doctrine set forth in these cases, and into something quite different, but they demonstrate the variety of circumstances and show the firm basis for the presumptions arising from reenactment alone. (Secretary's Petition, p. 17a).

Instead of reenactment, and silence on the issue, as an acceptance of interpretation, we regard the events hereinabove described as an affirmative adoption of the very basic application of the mining laws to make it part of the statutory method for development of the oil shale reserves. (Secretary's Petition, p. 18a).

This is no more than an application of the doctrine developed over the years in the reenactment cases but in the presence of the added significant element described above at some length,—the extensive participation by Congress in the specific issue. (Secretary's Petition, p. 18a).

Then, in final summary, the lower court concluded:

The combination of circumstances we have before us presents a unique situation which, as we have said above, constituted an addendum to the mining law which cannot be removed short of Congressional action. It is simply an application of the doctrine arising in the reenactment cases referred to above with special emphasis on the added element of affirmative action by Congress. The affirmative action by Congress on the point here is overwhelming. (Secretary's Petition, p. 20a).

The "affirmative action" of Congress relied on by the lower court really was nothing more than a failure by Congress to take any action at all to amend the mining laws when it knew that the Interior Department was treating oil shale claims as valid even though there had been no discovery of a "valuable mineral deposit" within the meaning of the mining laws.

The lower court's decision is a very dangerous judicial precedent which penetrates the government's separation of powers and invites statutory amendments through nothing more than erroneous administrative interpretations of statutes coupled with judicial complicity. Congress really doesn't get into the act at all in any constitutional sense. For that reason alone, the lower court's decision would deserve review by this Court.

B. *Propriety of Departmental Correction of Earlier Erroneous Administrative Interpretation of Statute*

The Department of Interior should not only be permitted — but should be obliged — to correct prior erroneous administrative interpretations of statutes. A case which is remarkably similar (except for the result) to the case at bar is *United States v. Imperial Irrigation District,* 559 F.2d 509 (9th Circ., 1977), wherein it was held that an earlier Secretary of the Interior's administrative interpretation of the excess lands provision (160-acre limitation) of the Omnibus Adjustment Act of 1926 was not binding or controlling on a later Secretary or on the courts, if the earlier interpretation was in error. The lower court (322 F. Supp. 11) had held that an administrative decision of Secretary of the Interior Ray Lyman Wilbur, issued February 24, 1933, was binding on the court because (1) it had been followed consistently for nearly forty years, (2) the

legislative history of the Omnibus Adjustment Act of 1926 supported the Secretary's opinion, (3) Congress repeatedly had been made aware of the Secretary's opinion and seemingly acquiesced in it, and (4) very substantial investments had been made by private parties in reliance on the Secretary's opinion.

Those facts and contentions were set forth in considerable detail at 322 F.Supp. 15-27. A careful review of those facts will demonstrate that there was genuine, active and repeated congressional acquiescence in the administrative interpretation. Nevertheless, the Ninth Circuit Court held that the Secretary's interpretation in 1933, and the administrative practice since that date, constituted an incorrect interpretation of the law and would not be followed by the court:

> . . . The appropriate deference to be accorded an administrative construction of a statute is that a 'consistent and longstanding' interpretation of a Congressional enactment by an agency charged with administration of that statute is entitled to 'considerable weight' but it does not control the decisions of the courts. *United States v. National Association of Securities Dealers,* 422 U.S. 694, 719, 95 S.Ct. 2427, 45 L.Ed. 2d 486 (1975). The ultimate responsibility of interpreting the language of Congress resides in the courts. *Zuber v. Allen,* 396 U.S. 168, 193, 90 S.Ct. 314, 24 L.Ed.2d 345 (1969). (599 F.2d 509 at 539).

In *Imperial,* a later Secretary of the Interior had determined that a forty-year-old administrative opinion of a predecessor Secretary and the department practice in accordance therewith were in error and should be reversed, but the trial court said that the later Secretary of the Interior could not change the administrative interpretation adopted by the earlier Secretary. The Court of Appeals for the

Ninth Circuit reversed on appeal, saying that the later Secretary not only could, but must, correct the erroneous interpretation and practice. That decision is clearly sound, contrasted with the decision of the Tenth Circuit in this case.

V. CONCLUSION

It is respectfully submitted that a writ of certiorari should be granted in accordance with the Secretary's petition.

Dated this 10th day of July, 1979.

.....

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July, 1979

CERTIFICATE OF SERVICE

I, Robert B. Hansen, Attorney General of, and counsel for, the State of Utah, and a member of the Bar of this Court, do hereby certify that three copies of the foregoing Brief of the State of Utah as *Amicus Curiae* were served upon each of the following by mailing the same, postage prepaid, this 10th day of June, 1979, all in accordance with the Rules of this Court

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Supreme Court, U. S.
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NOV 15 1979
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APPENDIX

In the Supreme Court of the United States

OCTOBER TERM, 1979

No. 78-1815

CECIL D. ANDRUS, SECRETARY OF THE INTERIOR,
Petitioner

—*v.*—

SHELL OIL COMPANY AND D. A. SHALE, INC.

ON WRIT OF CERTIORARI TO THE UNITED STATES
COURT OF APPEALS FOR THE TENTH CIRCUIT

PETITION FOR WRIT OF CERTIORARI FILED JUNE 4, 1979
CERTIORARI GRANTED OCTOBER 1, 1979

In the Supreme Court of the United States

OCTOBER TERM, 1979

No. 78-1815

CECIL D. ANDRUS, SECRETARY OF THE INTERIOR,
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ON WRIT OF CERTIORARI TO THE UNITED STATES
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DATE	PROCEEDINGS

1974

8-20 COMPLAINT-pd
Summons Issued

3-26 Marshal's return of service on Attorney General and Roger C. B. Morton on 8-21-74

10-21 ANSWER OF Defts to Complaint . . . Cert of Service.

12-16 PRETRIAL CONFERENCE SET January 24, 1975 at 11 AM.

1975

1-27 Plaintiff's statement concerning nature of case and time required for briefing motions for summary judgment.

Stipulation of counsel advising of how case is to proceed. Signed (SGF) Pre-Trial Order . . . Counsel have until April 15, 1975 to file and serve motions for summary judgment . . . answer briefs are be filed 45 days thereafter and 15 days thereafter to reply.

4-10 MINUTE ORDER (SGF) . . . ORDERED: that extension of Time is granted for the filing of Motions for Summary Judgment to 4/18/75 . . . Clk's C.O.M. . . . eod 4/16/75

4-15 Pltf's MOTION for Summary Judgment

Certificate of Service of above MOTION, Findings of Fact & Brief

Pltf's Proposed findings of Fact (in blue binder)

Opening Brief for Pltf for Pltf

4-17 Defts' MOTION for Summary judgment . . .
Memorandum of points and Authorities in Support of Motion for summary judgment. . . . C.O. Service.

DATE	PROCEEDINGS

1975

4-30 Statement in Support of Admisisons of Fowler Hamilton, and Donald L. Morgan.

HEARING (SGF) . . . Admission of Counsel . . . ORDERED. An the oral motion of James Dean, Fowler Hamilton and Donald L .Morgan are admitted to practice for the purposes of this case. All documents filed are to bear the signature of local counsel . . . Recess . . . eod 5/1/75.

5-1 Memorandum of Points and Authorities in Support of Dfdt's Motion for Summary Judgment

5-30 Pltf's Answering Brief . . .

Brief for the contestees on the Order of Trial, the Burden of Presenting a Prima Facie Case and the Burden of Proof . . .

Certificate of mailing re Above.

6-2 Defts' Answering Brief . . . C.O. serviec.

6-16 Dfdt's Reply Brief . . . C.O.S.

Reply Brief of D.A. Shale, Inc.

Reply Brief on Pltf Shell Oil Co.

Attachment to Reply Brief of Shell Oil Co.

Certificate of Service of Reply Brief & Attachment of Shell Oil

6-18 Certificate of Service of Reply Brief of D.A. SHale, Inc.

7-8 Dfdt's Proposed Findings of Fact . . . C.O.S.

8-6 Copy to ltr to SGF re: Administrative record and affidt.

8-19 JOINT MEMORANDUM with respect to oral argument . . .

1976

7-12 Notice of Change of Address and Firm Name of plf counsel

DATE	PROCEEDINGS

1977

1-17 Sgd (SGF) ORDER . . . Plf Motion for Summary Judgment GRANTED . . . Def Motion for Summary Judgment DENIED . . . by 2/1/77 plfs to submit Order and Judgment setting forth claims w/particlularity and implementing court's ruling herein . . . CLk's COM . . . eod 1/18/77

1-31 Certificate of Service of proposed judgment

2-10 Sgd (SGF) JUDGMENT . . . judgment enter for plfs againd def as follows: decision of Board of Land Appeals REVERSED . . . applications to patent plfs claims REMANDED to Dept of Interior . . . court retains jurisdiction for purpose of entry of further orders as may be necessary for carrying out this judgment or court's order of 1/17/77 granting summary judgment for plfs . . . each party to pay own costs . . . Clk's COM . . . eod 2/11/17

4-8 Defendant's NOTICE OF APPEAL from the Judgment of the U.S.D.C., granting the Plaintiff's Motion for judgment entered 2/10/77 . . . 8:15 a.m. Conference 4/18/77 —RECORD DUE 5/18/77.

Exhibit C-220. September 29, 1913, "Preliminary Report of the Oil-Bearing Shales Situated at Grand Valley, Colorado," made for the Reed-Midwest Investment Co., Colorado Springs, Colorado, by John C. Sparks, B. Sc., F.C.S., 30 Church Street, New York (pp. 1, 25-27, 29, 37-39):

At your request, communicated to me through Mr. C. A. Fisher, I went to the shale deposits situated in the bluffs north end northeast of Grand Valley, Colorado, arriving there August 14 and I subsequently made an examination on the ground and took samples for examination. I have considered carefully all the contributing data on the subject in regard both to the composition of the shale, the yields that may be obtained from it, the expense attached to the manufacture, the market price that may be obtained for the products, and herewith hand you my report.

From an examination of the oil produced, I am of the opinion that 5% would be gasoline, which I figure at 10¢ per gallon, 10% kerosene at 6¢ and 85% fuel oil at 7½¢. From an examination of the oil, I find that without the use of a wax plant, 4% by weight of crude wax can be separated from the oil worth approximately 3¢ per pound. Basing this on the yield shown here, which however, I know is an underestimate, the values produced per ton are as follows:

Gasoline,	2.66 gallons at 10¢	0.266
Kerosene,	5.23 gallons at 6¢	0.314
Crude Wax,	17 pounds at 3¢	0.51
Fuel Oil,	43.2 gallons at 1½¢	0.648
	Making a total of	$1.74 for the oil

The average amount of sulphate of ammonia produced by these different layers is 36.43 pounds per ton. The wholesale price of sulphate of ammonia is now $63 per ton, that is to say 3 1/15¢ per pound which amounts to $1.14 per ton. The total value produced therefore is $2.88. The valuation of 1½¢ per gallon for the fuel oil is lower than any figure I have seen in the country since the recent rise in the price of oil. This is only 60 cents

a barrel and I do not know of any oil, especially any paraffine base oil, at this price. Here in the east fuel oil is 6-1/8 cents per gallon, this price being obtained from the oil companies and checked by inquiries from the Diesel Engine Co. and the De La Vergue Machine Co. Both of these concerns tell me that their business in oil engines has been seriously crippled owing to the high price of oil.

In regard to the present value of sulphate of ammonia, I have been lead to understand that an impression exists in your mind that the price is liable to drop on this commodity. Studying the subject for a number of years and considering that this is a product with a world market, and, therefore, figures in other countries may be considered as well as figures in our own country, I wish to make a few quotations from "Oil Shales of the Mid-Lothians" published in Scotland. On page 139, price of Sulphate of Ammonia is given and on the following page the quantities manufactured during these periods is also given.

Year	Value in Shillings	Quantity Produced
1893	200	152,762
1903	250	263,664
1910	255	367,537
1912	275	———

The figures for 1912 were not available but the quantity has materially increased since that time. Taking up the subject from the point of view of our own market here in this country, I would direct your attention to "Oil, Paint & Drug Reporter" for September 8th, 1913, and refer to their Fertilizer Market reports on page 60. Under the heading of New York, September 6th, 1913, they quote:

> "Prices of sulphate of ammonia have hardened during the past week, and sellers are now holding firmer views regarding spot and shipments. Quotations have ranged as high as $3.15 for Fall delivery. Demand for sulphate is moderate, but inquiry has increased and a good Fall business is looked for.

> The markets abroad are likewise firmer, as reports state that any increased sale from the United States will result in driving prices to still higher levels. Foreign advices state that demand from foreign districts has augmented, and prices on this side have improved to the extent of 5s. The tendency is toward higher prices, but it is not very strong so far. Japan and the U.S.A. have sent considerable inquiries, as also Germany, to moderate extent, most of it for this year and some extending to Spring. For near delivery 13 L to 13 L 2 s. 6 d. has been paid, and there are buyers for say Jan - June next at L 13 7 s 6 d F.O.B. The approach for harvesting the corresponding crops will bring the article more in request so much more as some of our big customers have remained absent for any unusually long time."

In the same paper the Baltimore report states as follows:

> "The one development of marked note was a further rise in the price of sulphate of ammonia, which material has shown renewed strength of late, after a decline, and is now quoted at $3.15 from October to March, a jump of more than 10 cents in a week. Just what is causing the rise is apparently not known here, the suggestion is made that large purchase for Japanese account may be responsible for the rise, involving as they do, heavy demands upon the available supplies."

The Census report for 1909 gives the following figures on the value of ammonia sulphate produced in this country.

Year	Value	Quantity Produced
1899	$186,609.00	4120 tons
1904	600,856.00	10540 tons
1909	3,640,592.00	63381 tons

From a study of this table, you will see that not only has the quantity increased enormously, more than 600% in the five years from 1904-1909, but that also the price has steadily increased.

As a matter of fact the ammonia sulphate value has increased more than the general fertilizer values as the same census report states that between 1900 and 1904 the value of all fertilizers increased 26.6% and between 1904 and 1909, the value of all fertilizers produced increased 83.9%. During the later period as shown above, the ammonia sulphate value increased practically 600%. Further data on this subject is obtained from Senate Document, Volume 6, being a portion of the official document of Section 11 of the 62nd Congress, 1911 - 1912. This Senate document is entitled "Fertilizer Resources of the United States and on page 121 it is stated that only one-third of the ammonia sulphate used in this country is manufactured in the United States and that two-thirds is imported.

The cost of mining varies directly with the thickness of the seam. In Scotland on a 5 to 7 foot seam, two men can get out eight tons per day between them. On a smaller seam of 5 to 6 ft. the men can get out only about six tons between them.

In the Colorado shale there exists one good bed, shown in the graphic map page 20 as samples 105, 103, 104 and 106, of about 23 feet. At sample 109 is shown a bed 12 feet 8 inches. At sample 113, a bed eleven feet thick. On account of the large width of the seam, the thickness and continuity, I believe the shale can be mined and landed at the retorts for a maximum of ninety cents per ton.

The shale would be removed by the panel system and will not, I believe, need props as the columns of shale left standing will be amply sufficient to support the room. It must be remembered that the shale exists in and is adjacent to, both above and below, other seams and not brittle material as in Scotland.

The shale exists at an elevation and not in deep underground workings requiring expensive hoisting machinery. This is an important point. I have gone carefully into the question of conveying the shale by a gravity slide and while this can be done at the first proposed location it could, from the accounts I have received, be done more easily and cheaply at the second location, Rulison Ridge.

Referring back to the value of the produced on page 24, it will be shown that the oil products were values at $1.74 per ton of shale and the ammonia value at $1.14, making a total value of $2.88 per ton of raw material. On page 47 the cost of mining is given at 90 cents; on page 48, the cost of eduction is figured at 50 cents; and on page 52 the cost of the ammonium sulphate is 47 cents per ton, a total of $1.87 for costs. To this cost will have to be added certain overhead expenses such as interest on and maintenance of the railroad switch, storage tank, storage bins, superintendents, selling expenses, cost of pumping, etc. which however, will not be a large item in a plant of a capacity of 500 tons of shale per day as a minimum. In my opinion, there is a margin of profit of in the neighborhood of 75 cents per ton of shale.

I however, wish to state that more accurate figures on the cost of the plant on which a more accurate determination of depreciation and interest can be made, should be obtained. In the same way a more accurate determination of the cost of sulphuric acid in large quantities, a more reasonable adjustment of the freight rate from Denver to Grand Valley and an investigation into the possibility of utilizing the sulphur contained in the shale instead of buying sulphuric acid, should also be made.

SUMMARY

1. The deposit of shale at Grand Valley, Colorado is large and has been proven on the fact ten miles long, having a depth up Parachute Valley of approximately 3 miles. The quantity of shale is amply sufficient to maintain a large works for an extended period, 8040 acres have already been obtained, giving ample supply of raw material.

2. The shale in its most workable seams contain approximately 55 gallons of oil and 36 pounds of ammonium sulphate per ton. There exists one seam of workable shale 10.6 feet in depth; another 25 feet in depth; another seam 11 feet in depth and an upper seam 16 feet in depth.

3. The good shale contains approximately 40% volatile matter, 1.35% sulphur and 5.5% nitrogen. The nitrogen only requires ⅓ of the total sulphur for conversion into sulphuric acid and this point should be investigated.

4. The continuity of the shale is proven at a number of points being shown to exist in a uniform bed unaffected by local physical conditions.

5. A satisfactory plant location was selected at which the shale could be transported by seams of a gravity slide. Another plant location, namely Rulison Ridge, should be investigated and a proper comparison made as to the selection of the better location.

6. Sulphate of ammonia has been gradually and steadily increasing, both in quantity use and in price. From the indications of the available data, both the quantity and price show a tendency of still increasing.

7. The water available in the Grand River is suitable for the purposes required.

8. The products produced have a total value of $2.58 and the cost of extracting the products in a commercial form is $1.57.

9. The estimated profit per ton is 75 cents.

10. The cost of the plant and equipment, including working expense, would require a capital of between $400,000 and $500,000.

11. Comparison between the cost of operation and the value of the products shows that the plant could be operated to give a good reasonable profit on a permanent basis and that therefore the deposit of shale at Grand Valley is worthy of more careful consideration.

Exhibit C-714. February 12, 1916, Hearings before Senate Committee on Public Lands, "Leasing of Oil Lands" (pp. 301, 320):

STATEMENT OF MR. E. C. FINNEY, BOARD OF APPEALS, DEPARTMENT OF THE INTERIOR

Mr. FINNEY. Mr. Chairman, I want to suggest to the committee an amendment to the general leasing provision of this bill, to include deposits of bituminous shale or rock.

The CHAIRMAN. Where should that go in, Mr. Finney?

Mr. FINNEY. As a separate section; probably section 19. It has been suggested to the department by the Geological Survey that there are large areas of rock of this character in Colorado and Wyoming from which can be extracted oil; possibly not when free petroleum is very cheap, but as it becomes higher in price it will pay to extract from this bituminous shale the oil. That would not interfere, of course, with the other use or disposition of the surface of the lands.

These areas are not at the present time covered by withdrawal, and the thought would be to simply give the Secretary of the Interior authority, should anyone desire, to lease these areas of bituminous shale or rock for the extraction of oil. . . .

STATEMENT OF DR. GEORGE OTIS SMITH, DIRECTOR OF THE GEOLOGICAL SURVEY

Mr. SMITH. I simply wish to put myself at the pleasure of the committee to answer any questions that may have come up before you.

With regard to the amendment which has been offered by the Secretary of the Interior and was read by Mr. Finney, that is predicated upon the realization that some time in the future—I will not attempt to say exactly when—we will have to look to some other sources than the present supply of petroleum for the many products that are made from crude oil.

We know that this oil shale occurs in large deposits in western Colorado, eastern Utah, and possibly up into Wyoming, but the oil-bearing portion of the deposit thins as it goes north. We know there are productive measures of that shale, which we call oil shale, simply because oil can be extracted from it or distilled from it.

Senator THOMAS. Have you seen the report of the Secretary of the Interior, which was perhaps prepared by you in answer to a resolution of the Senate?

Mr. SMITH. Yes; I have a copy of that.

Senator THOMAS. It was laid on our desk yesterday, and it was a very illuminating document.

Mr. SMITH. Yes, sir. There are a few paragraphs which give the quantity of oil shale. We do not go into the figures with regard to the content of oil, but we can simply say that it figures out into the billions of barrels. It is something that we will utilize some time.

Senator THOMAS. There is one thing in the report that I noticed very particularly, because I had not known it before, and that is that oil and gasoline had been extracted from these shale formations in Scotland, and they had been doing that for some time.

Mr. SMITH. And they are being extracted this year. I have heard that they are getting a little more for one of the by-products this year, and the industry has been stimulated by that, possibly, but it has been going on for many years.

Senator CLARK. Has not the investigation proceeded to a considerable extent, so that practical oil men have been looking to these shale beds, and have been experimenting with them; they have been ascertaining very closely the cost of production of oil from those shale beds and are looking confidently to the use of them in the industry in the not distant future?

Mr. SMITH. I do not know the particulars of that, Senator, but I think it is true. . . .

Exhibit C-90. April 11, 1916, Letter to the Secretary of the Interior from George Otis Smith, Director, United States Geological Survey (pp. 3-4):

The department can probably regard lands containing oil shales as coming within the purview of either the lode or the placer act without placing a particularly strained construction upon those acts. The type of reasoning applied in the Harry lode mining case (41 L.D., 403), in which it was decided that deposits of phosphate rock are subject to disposition only under the provisions of the lode mining laws, would apply equally well to the oil shales. On the other hand, the extension of the placer act by the law approved February 11, 1897, to lands containing petroleum or other mineral oils, can logically and without strained construction be extended to deposits of the types herein considered. Although either construction is quite

possible, the latter appears to be more in harmony with the intent of the statutes and if adopted would bring all classes of oil-producing land under the same law, and that the more fitting one because of the lack of the apex feature and the complications that arise from it under the lode law.

It appears to me therefore that Senator Myers may well be informed that although the question appears to be a new one and no specific case involving it is before the department, your preliminary opinion is that the placer law is applicable.

Exhibit C-89. May 12, 1916, Letter to E. C. Finney, Member, Board of Land Appeals, from Commissioner, General Land Office (p. 1), and attached undated memorandum from Mr. Howard, Chief, Division N (pp. 17-18):

Referring to your note of the 13th of April last, I return herewith the letter prepared by the Geological Survey for the Secretary's signature in re bituminous shales and all papers which accompanied said letter. I have caused the matter to be considered by Mr. Howard of this office, and hand you herewith a memorandum in the matter which has been prepared by him. There has also been prepared and is herewith submitted a letter for the Secretary's signature to take the place of the one prepared by the Geological Survey. . . .

The question is a very novel one, and yet if we have regard to the exact language of the statute (the act of 1897), and the language of the Department in the case reported in 39 L. D., supra, it would appear that a discovery of oil-shale, yielding by distillation mineral oil in sufficient quantities to justify a prudent person in the expenditure of money and labor in the exploration of said shale oil petroleum, is subject to location and entry under the provisions of said act of 1897.

Considering the newness of the question and the dearth of decisions with reference thereto, so far as this country is concerned, may I respectfully suggest that the matter also receive consideration at the hands of the Law Board.

Exhibit C-88. May 16, 1916, Letter to Senator Henry L. Myers from First Assistant Secretary of the Interior Andrius A. Jones (pp. 2, 5):

It appears from your previous letter that Mr. Walker is in doubt as to whether the locations above referred to, held under the Petroleum Act, are sufficient title and whether the Company can hold the oil shale deposits under the Petroleum Placer Act, in consequence of which he sought to get a ruling on the matter from the Land Department before proceeding with the erection of distillation machinery at a heavy cost. . . .

It is always, in every case, a question of fact, to be determined after the matter is regularly presented to the Department, as set forth in said departmental letter of January 19, 1916, whether a discovery has been made or exists within the limits of the claim or location and each of them, and until the matter is regularly presented the Department must decline to express a binding opinion in the premises; but it would seem that a discovery by competent locators, locating in good faith, of oil shale, upon the unreserved, unappropriated and unwithdrawn public domain, capable, by approved methods, of yielding oil in sufficient quantities so as to make the land chiefly valuable therefor, would be a sufficient compliance with the provisions of said Oil Placer Act of 1897, and that locations based upon such a discovery must be made and entered, if at all, under the provisions of said Act of 1897.

Exhibit G-81. May 23, 1916, Letter from George Otis Smith, Director, U.S.G.S., to Commissioner, General Land Office (pp. 1-2):

The oil shales of western Colorado and adjoining areas constitute an undeveloped source of petroleum to which attention was called by the Geological Survey of 1901, and it is now recognized as possible that these shales will prove equally important as a source of nitrogen. During the field seasons of 1913, 1914, and 1915, reconnaissance examination in this region was actively carried forward, and it was demonstrated that over wide areas

oil shales are present which average higher in petroleum content that these commercially worked in other countries. The average shale tested within the area examined yields more than one-half barrel of crude oil per short ton of rock and a yield of one barrel per ton is not uncommon.

The net result of oil shale investigations already made is that the oil-shale areas in Colorado, Utah, and Wyoming constitute a latent petroleum reserve whose possible yield is several times the estimated total remaining supply of petroleum in the United States.

While the data at hand are not sufficient to warrant a specific statement as to the total recoverable nitrogen content of those shales, it is believed possible that this will prove so large as to give these deposits a value as a source of nitrogen equal to their value as a source of petroleum.

In view of the high prospective mineral value of lands underlain by oil-shale deposits it is, of course, apparent that they should not be permitted to be acquired under the nonmineral land laws. The lands have not been recommended for withdrawal because the oil-shale industry is not yet developed in the United States, and as it is desired to give opportunity for the establishment of experimental plants, it is believed the lands should remain open for the present to acquisition under the mineral-land laws, even though they are ambiguous and but poorly adapted to deposits of this type.

Accordingly, I hereby classify the tracts listed below as mineral lands, valuable as a source of petroleum and nitrogen, and request that you make the proper notation of the classification upon your records: . . .

Exhibit G-31. June 29, 1916, Letter to Register and Receiver, Glenwood Springs, Colorado, from Commissioner, General Land Office (pp. 1-2):

I have to advise you that the Director of the U.S. Geological Survey by his letter of May 23, 1916, classified the lands described on the inclosed photographic copy of extract of said letter as mineral lands, valuable as a source of petroleum and nitrogen.

This classification, being made without withdrawal, will be operative under and subject to the provisions of the act of July 17, 1914 (38 Stat. 509), entitled—

> "An Act to provide for agricultural entry of lands withdrawn, classified, or reported as containing phosphate, nitrate, potash, oil, gas, or asphaltic minerals."

The lands thus classified are subject to appropriation, location, selection, entry, or purchase, if otherwise available, under the non-mineral land laws of the United States, whenever such location, selection, entry or purchase shall be made with a view of obtaining or passing title with a reservation to the United States of the deposits on account of which the lands were classified or reported as valuable, together with the right to prospect for, mine, and remove the same; provided, all applications to locate, select, enter, or purchase under this provision shall state that the same are made in accordance with and subject to the provisions and reservations of the act of July 17, 1914, supra.

The unappropriated lands so classified are also subject to mineral exploration, location and purchase under the United States mining laws and regulations.

You will make the following notation on your tract books opposite the lands hereinabove described:

> "Classified as mineral lands, valuable as a source of petroleum and nitrogen, by U.S.G.S., May 23, 1916,"

and refer to this letter by date and number.

Promptly acknowledge receipt and report action.

Very respectfully,

/s/ [Illegible]
Commissioner.

Board of Law Review,

/s/ [Illegible]
6-28-EU

Exhibit C-64. September 15, 1916, Letter to Secretary of the Interior from Acting Secretary of the Navy, Franklin D. Roosevelt (pp. 2, 4):

Various official reports of the Interior Department indicate that the petroleum deposits of the United States are being progressively extracted, and at such a rate that it will be a matter of only a few years before it will be necessary to supplement the petroleum yield with oil derived from shale, if the Navy's urgent, extensive, and increasing need of the future is to be met.

The possibilities as regards procuring oil from our extensive shale deposit, has been strikingly and forcibly presented by the Geological Survey. The Navy Department therefore requests that the Geological Survey will select a suitable and accessible oil shale deposit on the public domain, and that the Interior Department will join this Department in requesting the President to take early action in setting aside such a selected area as a Naval Oil Shale Reserve . . .

There are exceedingly cogent and impelling military and strategic reasons, however, why early action should be taken upon this matter. The procuring of these Reservations can be obtained at this time without arousing any considerable amount of objection, while if action is delayed it certainly can be expected that progressive opposition will be aroused to such designation when the value of the oil shale deposits becomes known. In brief, this phase of the Problem of Oil vitally affects both the industrial and military interests of the Nation and is worthy of immediate consideration.

Exhibit C-67. November 15, 1916, Letter to the Secretary of the Interior from George Otis Smith, Director, U.S.G.S. (pp. 2, 3):

Two areas have been selected, one in Colorado, and one in Utah, in order to safeguard against the reduction of the reserves through the existence of valid claims not of record in the Department of the Interior. So far as known to the Survey, none of the lands included in the Colorado area have been patented and in Utah the patented

school lands that lie within the selected area have not been included in the order. Present information indicates that each of the two areas selected should yield at least the amount of oil which the Secretary of the Navy desires to have reserved, and probably much more. The Colorado area is near transportation, being but a few miles north of the Denver and Rio Grande Railroad, and includes a part of the richest of the known oil shale deposits. . . .

Because of the apparent richness of these deposits it has not been necessary to select particularly large areas, only parts of eight townships being involved, the total acreage being less than that of six full townships. The selected areas are in arid sections of Colorado and Utah, where the land is of little agricultural value. . . . Furthermore, the unreserved oil shale areas are so greatly in excess of those reserved that the interference with any commercial oil shale industry that may be established will not be serious.

Exhibit C-5. Annual Reports for the Fiscal Year Ending June 30, 1917, of the Secretary of the Interior (p. 73), the Geological Survey (pp. 903, 512), and the Bureau of Mines (p. 610):

As a result of the investigations of the western oil shales, it is believed that it is now commercially feasible to work selected deposits of shale in competition with oil from oil wells, and that these oil-shale reserves can be considered of immediate importance to the oil industry and to the defense of the Nation. . . .

The investigation of the so-called hydrocarbons or oil-shale deposits of the country, begun four years ago by the Survey, has been diligently prosecuted. The extension of the oil shales of the Uinta Basin wertward toward Green River in Utah has been mapped, with the discovery of new areas, so that it is now estimated that there is enough of this shale, in beds 3 feet or more in thickness and capable of yielding more than 22 gallons of oil to the ton by distillation, to provide as much as 40,000,000,000 barrels of petroleum. The Uinta Basin contains a

vast storehouse of petroleum in this form, the volume of which is better realized when it is recalled that all the oil that has yet been produced in the United States is but about 3,500,000,000 barrels. The oil fields of the United States are now producing a little over 300,000,000 barrels of petroleum a year, which is about two-thirds of all that is yearly taken from the ground the world over. What new oil pools and fields may yet be discovered in other parts of the world, particularly the less explored regions, no one can foretell, but it seems probable not only that oil will be distilled from the shales of the Green River group long after the principal oil fields of the world have been exhausted but also that the total amount that will be obtained from this source may exceed the world's total production of natural petroleum. The standard of richness named in the above estimate is said to be up to the average of the Scotch shale, which has for many years been the basis of a large industry and which is now providing distillate for British naval and military uses.

A report showing the distribution of the oil shales in Colorado and northeastern Utah and giving analyses and the results of rough tests and laboratory experimental distillations, nitrogen determinations, etc., has been issued as Bulletin 641-F, and another report describing the westward extension of the deposits, with additional details as to the composition of the shales, is now ready for publication. A report giving the results of distillation tests of richly bituminous shales in several of the Eastern States has been issued as Bulletin 641-L. . . .

Oil-shale withdrawals.—Of special interest during the year was the creation of two naval oil-shale reserves, one of 45,440 acres in Colorado and one of 86,584 acres in Utah. Lands included within these reserves are not subject to agricultural or mineral entry and in that respect differ from the classified oil-shale land.

The classification of oil-shale land in Utah was continued in 1916, and large areas have been added to the classified mineral lands. Field examination by the Survey during the four seasons of 1913-1916 has shown that the potentiality of the oil shale of this region as a source

of petroleum is enormous. There is also locked up in these shales a vast amount of nitrogen which can be recovered as a by-product in the refining of the shale and used in the manufacture of fertilizers, explosives, etc. . . .

INVESTIGATIONS OF OIL SHALES.

During the year the Bureau of Mines has been particularly interested in the vast deposits of oil shales in Colorado and Utah that have been disclosed by the field investigations of the Geological Survey. Because of the threatened shortage of petroleum from oil fields in the future these shales are considered to be the principal reserve in this country for the future supply of gasoline and other petroleum products. Consequently, much attention has been given to preliminary investigations of the richness of the shales, and a detailed study is being made of the best methods of obtaining oil from the shales, the character of the shale oils and the proportions of the various oil products and by-products obtainable by different methods of distillation. The investigations made lead to the belief that it is now commercially feasible to work selected deposits of shale in competition with oil from oil wells, and that these oil-shale reserves can be considered of immediate importance to the oil industry. Several commercial plants for mining and treating the shale have been planned and the Bureau of Mines will closely follow the developments. It is believed these investigations have already demonstrated a reserve of oil adequate for all future needs of the Navy. This investigation was in charge of D. T. Day, consulting chemist.

Exhibit C-388. September 8, 1917, Letter to Representative Edward Taylor of Colorado from Director, U.S.G.S. (p. 1):

In response to your call at my office on September 5th, relative to the contemplated oil-shale withdrawal in Garfield County, Colorado, mentioned in Mr. James Doyle's letter to you of August 31, 1917:

There seems to be some misunderstanding regarding the proposed oil-shale withdrawal in Garfield County,

Colorado, referred to by Mr. Doyle, as no withdrawal of oil-shale lands is contemplated by the Government at the present time. It is true that the Government, and particularly the Geological Survey, has spent considerable time and money in the last few years in the study of the oil-shale deposits. As a result of the field examinations made from 1913 to 1916 it has been clearly demonstrated that the latent potentiality of the oil shale of this region as a source of petroleum is enormous. It is also known that there is locked up in these shale a vast amount of nitrogen which can be recovered as a by-product in the refining of the shale and used in the manufacture of fertilizers and explosives. With all this information at hand, the Government has consistently held that the oil shale lands should not be withdrawn, but should be classified as mineral land and made available to the public under the United States mining laws. Following this policy, the first classification of oil shale lands was transmitted to the Commissioner of the General Land Office by the Survey, May 26, 1916. * * * The only oil shale lands in Colorado that have been withdrawn for Government purposes are those embraced in Naval Oil Shale Reserve No. 1, Colorado No. 1, embracing 45,440 acres.

Exhibit C-92. August 20, 1917, Letter to Secretary of the Interior from R. D. George, University of Colorado, Boulder (pp. 1, 2):

Messrs. D. D. Potter, G. W. Bowman and a few associates are about to organize a company for the exploitation of the oil shales near Grand Valley, Garfield County, Colorado. They have asked me to advise them in the matter of the location of claims, the investigation of processes and the installation of a plant for the distillation of the shales. They are well-backed financially, and are substantial and successful men in their communities.

On my advice they have located several thousand acres along the branches of Parachute Creek, as shown by the map accompanying this letter. In making their locations they have endeavored to comply with the government regulations to the fullest extent. But in order to assure

themselves that they have complied with the regulations governing the location of oil shale claims they have asked me to communicate with you in this regard.

Before further expenditure of money for roads, plant, etc. they wish to be assured by you:

1. That the lands which they have located have not been withdrawn and are not likely to be withdrawn for government purposes. . . .

3. That if they go on and fulfill the assessment or development duties and requirements they may acquire patents to said lands. . . .

In short they wish to be absolutely in the right, so that they may be assured that in so far as their relations to federal authorities are concerned their investment, and the investment of their friends with them are safe and wisely made.

Exhibit C-93. September 6, 1917, Letter to R. D. George, State Geologist, University of Colorado, from First Assistant Secretary of the Interior, Alexander Vogelsang (pp. 1, 2, 4):

I am in receipt of your letters dated August 20 and 21, 1917 . . . Under date of May 23, 1916, the public lands in these townships were classified as mineral lands, valuable as a source of petroleum and nitrogen, by the Director of the United States Geological Survey. This classification did not adversely affect valid mining locations existent at the date of classification, nor does it affect the right to make and maintain mining locations on such lands.

While the Department has not had occasion to make a decision in a proceeding involving the question, from present information, I believe that public lands containing valuable deposits of oil shale are subject to entry and patent under the placer mining laws. One who has made a valid location of a tract of the public land under the United States mining laws, acquires a right to the possession thereof, which he may enjoy as long as he complies with such laws.

In conclusion, I may say that, in view of the status of these lands, so far as shown by the records of the General Land Office, and the laws relating to placer mining claims, there appears to be no reason why these parties will not be fully protected, if they have made bona fide locations and shall proceed to the development of the mineral deposits thereof.

Exhibit C-209. October, 1917, Railroad Red Book Article by R. D. George, State Geologist, Colorado Geological Survey, "Oil Shales in Colorado":

OIL SHALES IN COLORADO

By R. D. GEORGE
State Geologist, Colorado Geological Survey

Reprinted from The Railroad Red Book of October, 1917
Official Magazine of the Passenger Department of the

DENVER & RIO GRANDE RAILROAD

AT THE END of 1915 the total proven area of productive oil land in the United States was 4,109 square miles. So-called "oil fields" were of vastly greater extent, but the actually proven ground had the area stated. Up to that date the total production of oil from the proven territory had been 3,617,000,000 barrels, and the possible future production was estimated at 5,753,000,000 barrels. These two figures added give the estimated total original content of the proven fields as 9,370,000,000 barrels. This would be 2,271,000 barrels per square mile for the original content, and 1,400,000 barrels future production per square mile.

In northwestern Colorado alone we have over 1,500 square miles of territory in which there are commercially workable oil shale beds averaging over 20 feet in aggregate thickness, and capable of yielding at least 36 gallons of oil per ton of shale. (No beds under four feet thick are included in this estimate.) These figures are very conservative, and I believe far below the mark, and

yet their meaning is astounding. In one acre of this area there would be 37,500 barrels of oil. In each square mile there would be 24,000,000 barrels. This is over ten times as much as was originally contained in each square mile of the proven oil territory of the United States, and seventeen times as much per square mile as now remains in the proven fields. If we consider the whole area of 1,500 square miles of oil shales in Colorado we have an oil content of 36,000,000,000 barrels, or just under ten times as much as has been produced in this country since the discovery of oil in 1859.

Are these merely interesting facts or have they any commercial significance? In Scotland, France, Australia and New Zealand similar shales are being distilled, and the resulting crude oil is refined and made to produce a great variety of commercial products. The Scottish shale oil industry was started about 1850, and is flourishing today as never before. The dividends paid by the operating companies range from 7 per cent to 50 per cent, and the average dividend of the six companies is about 18 per cent. Omitting two companies working on very thin shale beds, the average dividend would be 24 per cent.

A comparison of conditions in Scotland with those in Colorado may help to answer the question.

The Scottish shales lie far below the surface on which the treating plants stand, and have to be hoisted through shafts or hauled up inclines. The Colorado shales lie from 1,000 to 2,500 feet above the valley floors where plants should be erected, and can be lowered by gravity.

The Scottish shales are in irregular beds, which thicken and thin out, are faulted and thrown into folds which greatly increase the cost of mining. The Colorado shale beds are constant and uniform in thickness, lie in horizontal position and are neither folded nor faulted.

The Scottish shale layers vary in oil content from place to place. The Colorado rock is very constant in its oil content.

The Scottish shales as worked average 30 U.S. gallons of oil per ton. Vast bodies of Colorado shales in benches 6 to 10 feet thick will average over 50 gallons per ton.

The Scottish shales yield a greater amount of sulphate of ammonia than will the Colorado shales. This appears to be the only point of advantage possessed by the Scottish shale.

The Scottish shales yield the following commercial products: Gasoline, motor spirits, illuminating oil, lubricating oil, gas oil, cleaning oil, jute oil, paraffine wax, coke, still grease, sulphate of ammonia. In addition to these marketable products the shale yields a large volume of gas which is used under the retorts, and a considerable quantity of residue used as liquid fuel in the plants.

Tests by the writer and others appear to show that the Colorado shale crude will yield a higher percentage of gasoline, motor spirits and kerosene and an equal percentage of gas oil and lubricating oils. The ammonium sulphate content of the Colorado shale is probably about 20 to 25 per cent below that of the Scottish shale.

Phenols are present in what appears to be commercial quantity. From these may be produced many commercial products not obtained from the Scottish shale.

The shales are heated in retorts arranged in groups of four over a single fire-box. These groups are arranged in benches of 64 retorts each. The average capacity of the Scottish retorts is about four tons per day. The vapors pass over from the retorts into condensers in which the crude oil is collected. The uncondensible gases pass on into the ammonia plant, in which the sulphate of ammonia is collected. After this they are used as fuel.

The refinery is in most respects similar to our oil refineries.

At the present time the demand for petroleum products far exceeds the current supply. As a consequence the oil reserves are rapidly decreasing, and the government is asking for retrenchment in the use of gasoline and other power products.

There can be no reasonable doubt that these shales are the raw materials for very large and very profitable industries in the state.

Exhibit C-97. December 26, 1917, Letter to Representative W. A. Ayres from First Assistant Secretary of the Interior Vogelsang (p. 1):

Large areas of land in Colorado, Utah, and Wyoming, have been classified by the Department as mineral land valuable for oil shale. The land is classified, except two small areas, one each in Colorado and Utah which have been set aside as Naval oil-shale reserve, are open to mineral entry under the mining laws of the United States and to nonmineral entry in accordance with the provisions of the Act of July 17, 1914, the shale deposits when entries are made under this act being reserved for separate acquisition under the mineral land laws. . . .

Exhibit C-72. February 2, 1918, Letter to U.S. Attorney General from First Assistant Secretary of the Interior Vogelsang (p. 1):

I am in receipt of your letter of January 8, 1918, inclosing for information and appropriate action, a copy of a letter dated December 28, 1917 from the Special Assistant to the Attorney General relative to certain facts respecting operations upon lands within Naval Oil Shale Reserve No. 1, Colorado.

I am advised by the Commissioner of the General Land Office that the Chief of Field Division at Denver, Colorado has been directed to make an investigation for the purpose of ascertaining the facts regarding the operations within this reserve, and upon receipt of report such action will be taken as the situation may require.

Exhibit G-384. February 26, 1918, Hearings Before the House Committee on the Public Lands, "Oil Leasing Lands" (pp. 811, 812, 818, 819, 820, 823, 828, 831, 832, 896, 898, 904, 905, 913):

Mr. TAYLOR. Mr. Chairman, I have asked the State geologist of Colorado, Prof. Russell D. George, of our State university, to appear here to-day and make, on

behalf of the State of Colorado primarily, and many thousands of our people who are hoping and trying to do something toward the development of an oil shale industry in Colorado—to come before the committee and make a statement, more from a scientific and professional standpoint than otherwise.

Prof. George has been making careful and exhaustive investigations for many years and has had great experience in this matter, and I know that his knowledge will be beneficial to the committee, and I would like to have them hear him without much restriction or interruption.

The CHAIRMAN. You are recognized for an hour, Mr. George.

STATEMENT OF PROF. RUSSELL D. GEORGE, STATE GEOLOGIST OF THE STATE OF COLORADO.

Mr. GEORGE. We appreciate the privilege you have given us of coming before you, but we would like to state that the hearing is not of our seeking. The facts that we wish to present to you to-day were presented to the Department of the Interior some days ago and they requested us to make the same presentation to your committee, and it is with that in view that we are before you to-day.

The gist of the matter is that we wish to present the scientific side of an industry that is new to America, or at least new to this generation. There were shale retorting plants in this country many years ago, but since the year 1864, I believe, no shale has been distilled in a commercial way in the United States. The successful commercial treatment of the oil shales for the separation of oil and ammonium sulphate, and the refining of the crude oil for the various marketable products is an industry requiring the best scientific knowledge and the highest engineering skill. We hope that we may be able to give you a clear understanding of what the shale oil industry is, in order that your judgment may be directed toward either, (1) leaving the infant industry where it is, under the present mining laws and the present depart-

mental regulations, or (2) the speedy enactment of such legislation as may be necessary to foster, safeguard, and establish an enterprise which is destined to play a very important part in securing the industrial welfare of the country in the near future. Any delay in determining the rights and privileges of those who are engaged in the shale oil industry will militate against the growth and establishment of that industry. We wish, therefore, to leave those two points prominently before you. . . .

The oil situation of the United States is a matter that is not new to you, but I should like to present a few facts that may bring more vividly before your minds the necessity of providing something to take the place of the oil deposits of this country, which are being exhausted, and which, in a comparatively few years, will be gone beyond any possibility of recovery.

In 1914 the production of oil in this country was 266,000,000 barrels; in 1915, 281,000,000 barrels; in 1916, 300,000,000; in 1917, 341,000,000 barrels. How was this increased production obtained? It was obtained by the greatest drilling activity in the history of the United States. The probability is that the money actually expended in drilling in 1916 and 1917 exceeded by 100 per cent that ever expended in a similar time in this country. The price of oil in the crude in 1916 advanced 72 per cent. The price of finished products advanced 84 per cent. In 1917 the price of crude oil advanced about 40 per cent, and the price of the finished product, as nearly as it can be estimated with incomplete data, advanced 50 per cent. . . A little later, about three years ago, I started in again. At the time a number of men in Colorado were seriously considering the question of the treatment of the shales. Some had already located land and had begun development work on their claims. A little later, as a result of the many inquiries as to how these lands should be taken up and how they could best be worked, I wrote several letters to the Department of the Interior. One of these I addressed to the Secretary of the department; another to Mr. Manning, of the Bureau of Mines; another one to Mr. Smith, of the Geological Survey. About the same time I addressed

one to the Naval Fuel Oil Board. I shall not take time to read all these letters, but I wish to have all of them included in the records of this hearing.

The CHAIRMAN. Without objection, it is so ordered.

The letters from all the men to whom I have referred are very similar in tone, and give the best of encouragement and promise the utmost that they can do to aid in the development of these lands.

Mr. SMITH. Who gave that assurance?

Mr. GEORGE. The Bureau of Mines, the United States Geological Survey, and the First Assistant Secretary of the Interior.

Mr. TAYLOR. How many officials have given this assurance?

Mr. GEORGE. I may say that all of our correspondence and relations with the Deparmtent of the Interior have been of the most encouraging kind and the various officials have expressed the utmost good will toward bona fide endeavors to establish an industry.

Mr. SMITH. They would probably change their opinion if you should discover an oil well out there.

Mr. MAYS. Have you had anything from the Department of Justice?

Mr. GEORGE. No, sir; I have not.

Mr. MAYS. Have they in any way disturbed your plans?

Mr. GEORGE. No, sir. Some disturbing reports reached Colorado in reference to the possibility of including oil shale lands within the purview of the leasing bills now under the consideration of Congress.

Mr. TAYLOR. Didn't the Director of the Geological Survey, in answer to a letter from me, write a letter specifically authorizing me to notify everybody and authorizing me to publish his assurances that no more than 45,000 acres of the oil shale lands would be withdrawn, and that they need not be afraid to go ahead with their locations and development?

Mr. GEORGE. Yes, sir.

Mr. TAYLOR. I hold the letter in my hand, and I have notified the people and have published the assurances contained in that letter.

Mr. SINNOTT. Was the oil land withdrawn?

Mr. GEORGE. Previous to the assurances mentioned by Congressman Taylor, 45,000 acres of shale land had been withdrawn for a naval fuel oil reserve. Since that time there has been no withdrawal. Very large areas have been located for development, discoveries have been made, and assessment work carried out to such an extent that some of the locators are ready to apply for patents. . . .

Correspondence had brought out the fact that the Scottish manufacturers of shale-oil plants could do nothing for Colorado companies until some months after the close of the war. The Federal Shale Oil Co. had reached the point where they were ready to let a contract for the erection of a plant. I advised a trip of investigation to find out whether there were in America engineers qualified by first-hand knowledge and actual experience to erect a plant for the company.

In Pittsburgh I interviewed Messrs. Bacon and Hamor, director and assistant director of the Mellon Institute. The standing of these men may be judged by the fact that they have since been sent to France to take charge of the investigations connected with the utilization of gas as a weapon of warfare. These men are the authors of the best work on the technology of petroleum written in America. Mr. Hamor was one of those sent by the Canadian Government to the Scottish retorts. He is therefore familiar with the Scottish process and does not hesitate to say that the fundamental principle of that process is applicable to Colorado shales.

In New York I conferred with Dr. Chas. Baskerville, who was in charge of the tests for the Canadian Government. He is convinced of the possibilities of the industry and expressed the opinion that in view of the oil situation the industry should have been established before this.

Mr. John C. Sparks, also of New York, has done a good deal of work on the Colorado shales. He believes the Scottish process will work on the Colorado shales.

In Ottawa I discussed the matter with Dr. Haanel, director of the mines branch of the department of mines;

with Mr. Ells, of the mines branch, and with others. The question is a very live one in Canada, and the coming summer will witness much development.

In Washington I advised with the technologists of the Bureau of Mines and got much valuable information, although the lack of funds had prevented the bureau from carrying forward the extensive experimentation initiated.

I also went to the Pierce Engineering Co., of New York City, and without any intention of flattery or anything of the kind, I wish to say that I believe Mr. Pierce is by far the best informed man on all questions relating to the restoring of coal or shale or similar substances in the United States; and I believe he is the peer of any in the world on this question.

My conference with this company, and especially with Mr. Pearse, greatly strengthened my confidence (which was already strong) in the commercial possibilities of the oil shales. The time is opportune for the development of the shale-oil industry, and I believe it will go forward very rapidly . . .

The two things upon which the industry must depend are the crude oil and the ammonium sulphate. We have a rather peculiar situation regarding the fertilizer industry in the United States. The Chilean nitrate deposits from which this country drew so largely a few years ago can no longer be depended upon. We must look in our own country for a source of nitrogen. The shales offer that parts of Utah and Wyoming should yield theoretically about 41 pounds of ammonium sulphate to the ton of shale, but the theoretical is not often obtainable. The Scotch are able to save about 60 per cent of the theoretically possible content. That would leave us a return of about 28 to 30 pounds of ammonium sulphate from a ton of shale.

European countries found out many years ago that there is nothing equal to ammonium sulphate for sugar-beet culture, and that it has a very high fertilizing value for certain small grains, for potatoes, and other crops. It is a very important consideration in view of the increased demand on our food supply. Ammonium sulphate contains a larger percentage of available nitrogen than does the Chilian nitrate. . . . The Scotch shales are of

lower oil yield than ours, but they run higher in ammonium sulphate. The oil form the Colorado shales is a paraffine-base oil of very high grade. I think there is but little asphalt in it, and it promises to yield readily to certain processes of cracking by which the yield of gasoline may be very considerably increased. The lubricating oils of Scotland are among the best in the world, and there is reason to hope for high-grade lubricating oils from the Colorado shales. . . .

Mr. TIMBERLAKE. Then you do figure that by saving all of the byproducts of your process you will be able to manufacture the shale oil on a commercial basis?

Mr. GEORGE. I believe it is going to be possible to make a commercial success of it if plants of the size I have spoken of are installed and if absolutely correct scientific management is used. We can not claim any get-rich-quick game at all; that is utterly impossible. I am saying "we." I have not any financial interest in it whatsoever. I do not own a claim; I do not own a share of stock; and I have refrained from taking any financial interest because I wanted to be in a position to speak as I am speaking to-day in regard to this industry—for the people, for the State, and I believe for the Nation.

Mr. TAYLOR. Do you care to give the committee your own personal judgment, having been our State geologist for many years and having made this exhaustive research, as to what, if anything, this committee or Congress out to do in regard to this? Ought we to include it in this bill specifically and try to make some provisions to cover it, and, if so, what provisions? Or do you think that these various companies that have located under the placer law and have made discoveries ought to be specifically segregated by this bill and allowed to proceed, if they can, under the placer law?

Mr. GEORGE. My judgment would be, Congressman Taylor, that the companies which have already gone on, and which have expended their money, would be very grateful, indeed, if the present conditions could be continued just as they are under the placer act. It would

mean very much less disturbance of their plans; it would give them a feeling of security in regard to their holdings. It would seem to me that if anything is done in the way of new legislation, it would be very desirable to provide specifically for all those who have gone on and made their locations in an honest and sincere effort to develop the industry. Nothing should be done which could in any way impair their initiated rights.

Mr. TAYLOR. And in view of these departmental instructions, inducements, and assurances to them?

Mr. GEORGE. This favorable attitude of the department has been preached to them. They have been told of it through the press. You remember that in one of these letters I was authorized to make a very strong statement to all those who were interested in oil shales and who had made locations. I have taken occasion to copy paragraphs of these letters and send them out to those who have inquired, and it is the generally held view that the present condition is satisfactory. . . .

Mr. TAYLOR. I will say, Judge Raker, that Director George Otis Smith has written authoritatively and authorized me to publish a statement to the effect that the department will not make any more withdrawals of oil shale land, because they say they want to encourage the development. They have withdrawn this Colorado Naval Oil Shale Reserve No. 1, of 45,000 acres, in my home county, for the Navy alone, and they say that is enough of that, so that the rest of it is to be always open to development.

Mr. RAKER. What I understand from the doctor and from yourself is that you do not desire that this present bill should apply to the oil shale lands, and that the present mining laws should remain applicable to them as they are to-day?

Mr. TAYLOR. Yes; the Colorado people would much rather leave it that way. We would like to be let alone. But if this committee decides or Congress determines that they are going to include these shale lands in this bill, or have it by implication construed as applying to oil shale lands, then they want us to make provisions that are much more liberal than for ordinary pumping

oil wells, because shale is such a low-grade proposition and the much greater cost of a plant and for the necessary encouragement of building up an entirely new industry to take the place of threatened very great deficiency in oil. In other words, if Congress is unwilling to allow the shale lands to be administered under the placer law as they are now and let the people get a patent to them, then they want us to put in very liberal provisions in the way of acreage and not charge any royalty at all for 10 years or until it reaches an established and paying basis. . . .

Mr. TAYLOR. Mr. Chairman, I would like to have Mr. McMullin address the committee.

STATEMENT OF MR. SAMUEL G. McMULLIN, ATTORNEY AT LAW, OF GRAND JUNCTION, COLO.

Mr. TAYLOR. Please state your name, business, address, and whom you represent.

Mr. MCMULLIN. My name is Samuel G. McMullin; residence, Grand Junction, Colo. For 28 years I have been an attorney at law, and I represent the West Slope Oil Shale Protective Association, of Grand Valley, Colo., the Grand Valley Commercial Club, and the shale oil section of the American Mining Congress as attorney for this area. . . . last summer I wrote to the Commissioner of the General Land Office and got this reply, as follows (reading):

DEPARTMENT OF THE INTERIOR,
GENERAL LAND OFFICE,
Washington, July 9, 1917.

MESSRS. MCMULLIN & STERNBERG,
Grand Junction, Colo.

MY DEAR SIRS: In response to your letter of June 23, 1917 (B. M. McMullin), relative to oil-shale lands, I have to inform you that lands valuable for their deposits of oil shale, not withdrawn, may be located as placer claims. A copy of the United States mining laws

and regulations thereunder is inclosed and contains information as to the manner of acquiring title to placer claims.

There has been a withdrawal of approximately 45,440 acres of public lands to Garfield County, Colo., which withdrawal has been designated as naval oil-shale reserve No. 1, Colorado No. 1. The lands included in this reservation are not subject to appropriation in any form. The description of the land so withdrawn consists of two pages, and photographic copies thereof will be furnished at the rate of 15 cents per page.

There have been classifications, by the United States Geological Survey, under dates of May 23, 1916, and September 12, 1916, of oil-shale lands in Colorado as mineral lands, some of which are within Garfield County and some of which are also included in naval oil-shale reserve No. 1. The lands so classified, except those in the naval oil-shale reserve, are operative under and subject to the provisions of the act of July 17, 1914 (38 Stat., 509), which act provides for agricultural entry of lands withdrawn, classified, or reported as containing phosphate, nitrate, potash, oil, gas, or asphaltic minerals, the homesteader being obliged to reserve to the United States the deposits for which the lands were withdrawn or classified, together with the right to prospect for, mine, and remove the same.

Photographic copies of the descriptions of the oil-shale lands, classified as mineral, which cover 12 pages, will be furnished at the rate of 15 cents per page.

Very respectfully,

CLAY TALLMAN,
Commissioner.

DEPARTMENT OF THE INTERIOR,
GENERAL LAND OFFICE,
Washington, January 25, 1918.

Mr. F. A. WADLEIGH,
Passenger Traffic Manager,
The Denver & Rio Grande Railroad Co.,
Denver, Colo.

MY DEAR SIR: I am in receipt of your letter dated January 17, 1918, wherein you request information as to the method of filing upon and obtaining title to lands containing oil-shale deposits.

The act of February 11, 1897 (29 Stat., 526), provides in part as follows:

"That any person authorized to enter lands under the mining laws of the United States may enter and obtain patent to lands containing petroleum or other mineral oils, and chiefly valuable therefor, under the provisions of the laws relating to placer mineral claims."

It would seem that a discovery by competent locators, locating in good faith, of oil shale, upon the unreserved, unappropriated, and unwithdrawn public domain, capable, by approved methods, of yielding oil in sufficient quantities so as to make the land chiefly valuable therefor, would be a sufficient compliance with the provisions of said oil-placer act of 1897, and that locations based upon such a discovery must be made and entered, if at all, under the provisions of said act of 1897.

In regard to placer locations, see sections 2329, 2330, and 2331, United States Revised Statutes, printed on page 6 of the inclosed copy of the United States Mining Laws and Regulations thereunder. See also index to said pamphlet under the subjects Locations, Oils, Petroleum, and Placers. This, it is believed, will give you information sufficient for the purpose you desire.

There is now before Congress proposed legislation providing a system of leasing public lands containing oil deposits, but such legislation has not yet been enacted.

Very respectfully,

CLAY TALLMAN, *Commissioner.*

...

Mr. MCMULLIN. Not only did the department by the two bulletins and by the classification and by these letters encourage us to file on these lands under the placer law but they had the Geological Survey in 1915 send two men all through that territory making reconnaissance. In 1916 the same thing occurred, and in 1917 the same thing occurred, and in 1917 Dr. David T. Day came out there as the representative of the Bureau of Mines and told me in the presence of J. M. Givens and John M. Overfield, of Independence, Kans., who were my guests looking over the opportunities there, that if we went on and built a plant that the Bureau of Mines would send a —.

The CHAIRMAN. Is J. M. Givens interested out there?

Mr. MCMULLIN. No; but he has been out there, and he is very much interested. Day said they had sent him free of charge, at the expense of the department, and said his instructions were to induce in every way the installation of a plant in Colorado, Utah, Nevada, and California, as the department, for reasons given by Dr. George, was especially anxious to develop the industry.

We have known of those things; we have met those gentlemen. These companies I represent are financed almost entirely as far as they have gone, with Colorado money. In that agricultural community of western Colorado, from Leadville clear on down to Grand Junction, through Congressman Taylor's district—in Delta, Montrose, and Telluride—the mining fraternity have faith in this recourse, and we have organized our companies. . . .

Mr. FRY. I am going to answer it by saying that in our opinion we have complied with the placer laws, and having done the assessment work we would be entitled to payment, and from the records there are no fraudulent or improper entries which would prevent patents being issued.

Mr. TAYLOR. Let me supplement what you have said. Of course, Mr. Fry represents the Federal Oil Shale Co. I represent probably a hundred oil-shale companies—I represent all Colorado. I say to you this on behalf of Colorado, that if you will just expressly eliminate oil-shale lands from this bill and provide that they may

continue to be located, administered, and patented under the placer-mining law, our people would prefer to have you do it, and they will go ahead and try to get patents. If the department will not let them have patents they will be compelled then to come to Congress to get relief or try to come in and get a lease. But Dr. George Otis Smith, Dr. Manning, and Commissioner Tallman have all, for years, been urging these men to do this very thing, to locate and patent these shales under the placer law, and we do feel that, backed up with all of their letters and encouragement and classification, at my specific request, and all of their publishing to the world to the effect that "We won't make any more withdrawals of shale land; go ahead and develop them if you can, and patent them under the placer law," we do not believe they will not repudiate their actions and turn down these people who are following their specific and direct instructions right along.

Mr. MAYS. Different officials may come in.

Mr. TAYLOR. That is true, but these high officials will not welch on their own representations and instructions. Since talking with those gentlemen I believe if that kind of a provision is put in this bill it will be scrupulously recognized and enforced, and all those people who strictly comply with the law will get a patent. . . .

Exhibit C-556. April 24, 1918, Letter to The Haviland-Armstrong Co., Philadelphia, Pa., from Director, U.S. Bureau of Mines (pp. 1, 2):

You have requested me under date of April 15 for an expression of my opinion on the commercial feasibility of the oil shale industry in this country, and for a statement of the Bureau of Mines' attitude relative to the development of this industry at the present time.

Statistics dealing with crude oil production and consumption, the decline of the present proven oil territory, and the possibilities of new oil fields, all lead to the conclusion that it is only a matter of a few years under present conditions until there must be developed other sources of hydrocarbon oils than the oil wells themselves.

These courses are limited to high volatile coals, channel coal, liguites, and oil shales. Of those possibilities the oil shales offer by far the greatest promise because, in the first place, there are tremendous deposits of those shales which are easily accessible, and, in the second place, because they will yield large volumes of oil when destructively distilled.

As you no doubt know, there is now much interest and activity being displayed in the development of the oil shale industry in this country and all the estimates I have seen, which have been prepared both by engineers of this Bureau and by engineers of a number of the companies contemplating engaging in this industry, show that good margin of profit can be derived from large shale operations. It is generally admitted and understood that the shale oil industry must needs be conducted as a large scale manufacturing proposition handling a low grade material. Therefore, it seems that under existing conditions of supply and demand for hydrocarbon oils, it is now possible for an oil shale plant of large capacity to yield a satisfactory profit.

It is the function of this Bureau to promote the legitimate and most economic developments and utilizations of the natural mineral resources of this country. With this aim always in view, it is of course my desire to see the oil shale industry established as soon as possible so that when the real demand for hydrocarbon oils is thrown upon it, this industry will be so far advanced that it can take care of these demands. It seems to me that conditions are such at present that oil shale operations, if properly conducted, will be profitable, and that the industry can and will be developed by private enterprise and capital. This Bureau will certainly not consider the investment of money, labor, and material in a large oil shale plant at the present time an unpatriotic undertaking. It is time that someone did the pioneering in this industry and to the pioneer in any such enterprise belongs a great deal of credit. I assure you that this Bureau wishes to encourage in every way feasible the undertaking and legitimate development of the oil shale industry.

Exhibit C-104. November 9, 1918, Report to the Commissioner, General Land Office, on the La Paz oil shale claims, by Special Agent C. F. Levenberger and Mineral Examiner C. L. Duer (pp. 2, 6, 7, 8, 10, 11, 16-17, 19-20):

As a result of our investigations just completed, we find in this Naval Reserve the following locations:

Lignum Vitae Oil Shale Placer No. 6,
by Joseph Bellis, et al.

Oyler Oil Shale Placers 1 to 4 inclusive,
by J. L. Herwick, et al.

La Paz Oil Shale Placers 1 to 14 inclusive,
by Shoup, Doyle, et al.

Sheridan Oil Shale Placers 1 to 21 inclusive,
by Verner Z. Reed, James Doyle, et al.

Homestead Entry No. 011121,
by James A. Neilson;

Squatter's claim,
by one Fred Harlburt.

Report will be submitted on each of these claims or group of claims, separately, and we will now proceed to make report on:

LA PAZ OIL SHALE PLACERS 1 to 14 inclusive.

We find that prior to the location of this group of claims, the locators expended thousands of dollars . . . in the examination and testing of these oil shales and getting reports on the methods of extracting as practiced in the oil shale regions of Scotland. For this work some of the most eminent geologists and chemists in the country were employed. It was on the strength of the reports submitted by these experts that the locations were made and the assessment work performed by the original locators.

Of the original locators we interviewed and closely questioned the following:

James Doyle,	K. C. Schuyler,	W. F. Schuyler,
C. A. Fisher,	R. S. Hiltner,	O. H. Shoup.

We also took the affidavits of James Doyle and K. C. Schuyler who were most familiar with the original details concerning location and expenditures. These affidavits accompany this report.

From our investigation we are certain that each of the original locators of the La Paz group of oil shale placers was a locator with interest who believed in the prospective commercial value of these oil shales. . . . At a cost of $12,000.00 he has purchased a patent process for the extraction of oil from the shale and has constructed a plant near the town of Santa Maria, California. This plant is said to be about completed; has a capacity of some 50 to 75 tons of shale per day and has cost approximately $30,000.00. Mr. Reed has expressed his intention of erecting or causing to be created, an oil shale extraction plant with a capacity of not less than 1,000 tons per day on or adjacent to this group of claims. Both Mr. Reed and Mr. Doyle, the present owners of these claims, have for a number of years been, and now are, very enthusiastic over the future possibilities of the oil shale industry.

A large cliff of shale outcrops on each of the claims embraced in the La Paz group and the discoveries consisted of making openings into this shale escarpment and testing of samples therefrom by the application of heat. . . .

Colorado Naval Oil Shale Reserve No. 1 was created by Executive Order dated December 6, 1916, and is therefore subsequent to the date of discovery and location of the La Paz group of oil shale placers. The requirements of the mining laws and regulations have been met each and every year since those claims were located and therefore the creation of this Naval Reserve would have no effect on their validity.

We were informed by a representative of the U.S. Geological Survey that it was well known that bona fide oil shale placer locations existed within the confines of this shale reserve at the time it was created but that it was placed wherever it least interfered with bona fide locations. . . .

From the foregoing statements, we are of the opinion that the original locations of the La Paz Oil Shale Placer claims, as well as the subsequent transfers of title for same to the present owners, were regular in all respects. Further, we are of the opinion that these claims were bona fide locations at the time of the creation of the Colorado Naval Oil Shale Reserve No. 1 and that full compliance has been made with the mining laws and regulations. We would therefore recommend that the application for patent receive favorable action. . . .

Exhibit C-359. November 12, 1918, Report to the Commissioner, General Land Office, on the Oyler oil shale claims, by Special Agent C. F. Levenberger and Mineral Examiner C. L. Duer (pp. 6, 10):

. . . We believe the foregoing statements cover all the points of inquiry contained in your letter of January 28, 1918. The preliminary requirements regarding discovery, location, notices, as well as subsequent assessment work, have been complied with. . . .

From our investigation we are of the opinion that the Oyler placers are bona fide locations and that the requirements of the mining laws have been met up to the present time, and we would recommend that no adverse action be taken regarding these claims but that when application is filed for patent, a further examination be made to determine whether or not the requirements of the mining laws have been fulfilled. . . .

Exhibit C-98. April 11, 1919, Letter to Fred L. Morris, Lawrence, Kansas, from First Assistant Secretary of the Interior Vogelsang (pp. 1, 2):

So far as I am advised, the Department has had no such case before it for decision, but if these deposits of oil shales are valuable they are now subject to location and entry under the mining laws by citizens of the United States. Copy of the mining laws and regulations is inclosed.

As a prerequisite to patent, discovery of mineral is required and the expenditure of not less than $500 in mining and development work upon or for each claim.

Some of the most valuable shale lands in the public domain in Colorado and Utah have been withdrawn from disposition for the present. The general leasing bill, so called, which passed both Houses of Congress, but which failed of enactment at the last session because of legislative filibuster, proposes to lease oil shale lands of the United States in areas of sufficient size to warrant expenditures for their development. All of the data presented to the Department indicates that while these shales contain oil, the matter of their successful commercial extraction has not yet been finally worked out, and there is some question whether, under present conditions and prices, such plants can compete with the oil and gas produced from wells.

Exhibit C-7. Annual Reports for the Fiscal Year Ending June 30, 1919, of the Secretary of the Interior (p. 19) and the Geological Survey (p. 636):

OIL SHALE.

And beyond these in point of time lie the vast deposits of oil shale which by a comparatively cheap refining process can be made to yield vastly more oil than has yet been found in pools or sands. The value of this oil shale will depend upon the cheapness of its reduction, and this must be greatly lessened by the value of by-products before it can compete with coal or the oil from wells. There is every reason to believe, however, that some day the production of oil from shale will be a great and a permanent industry. And the country could make no better immediate investment than to give a large appropriation for the development of an economical shale-reducing plant.

So conservative an authority as the Geological Survey estimates that the oil shales of the Western States alone contain many times over the quantity of oil that will be recovered from our oil wells. The retorting of oil

from oil shale has been a commercial industry for many years in Scotland and France; in fact, oil was obtained from oil shale here in the United States before the first oil well was drilled. The industry is in process of redevelopment to-day and if successful will assure us of a future supply, but at the best it will take years of time and a vast investment of capital to build up the industry to such a point that it can supply any considerable proportion of our needs. It is imperative, however, that the development of this latent resource be furthered and brought to a state of commercial development as soon as possible. . . .

Further field work on the oil shales of the Western States showed that certain areas not previously acted upon contain deposits of rich oil shale. As a result of these investigations, 56,221 acres in the Debeque district, Colo., were classified as mineral lands valuable as a source of petroleum and nitrogen, and 4,080 acres in the same region previously classified as oil-shale lands were found to have insufficient mineral value to warrant this classification and were accordingly reclassified as nonmineral lands. The classified oil-shale lands of Utah were also increased by the addition of an area in the Uinta Basin extending northward toward the Colorado State line from the area previously classified. Field evidence having shown these lands to be underlain by valuable oil-shale deposits, 69,120 acres were classified as mineral land. The total area of oil-shale land classified as mineral land, including areas previously classified, is 4,117,377 acres.

Exhibit C-99. July 8, 1919, Letter to A. J. Pitts, Financial Editor, Detroit Times, from Assistant Secretary of the Interior (pp. 1-3):

I have your letter of June 17, 1919, requesting information as to the investment value of leases of oil shale lands in Utah, Colorado and Wyoming.

As you are probably well aware, there are large areas of lands in the states named containing shales yielding petroleum and certain other minerals; and these shales

will in all probability be sooner or later developed. The development of this reserve supply of petroleum simply awaits the time when the price of gasoline or the demand for other distillation products of the shales warrants the utilization of this substitute source. From the best information I can get, it is an open question as yet as to whether petroleum products can be successfully produced from the shales in competition with the products from oil wells at present prices. Claim is made by some that with the most up-to-date processes and on a large scale, including the refining operations, it can be done at a fair profit, others are doubtful of it. All the plants in this country so far are more or less experimental in character. I have seen no reference by these to the cost of extracting and refining the products, and this omission makes the representations in their literature as to values greatly misleading.

With reference to the leasing of lands containing such deposits, there is no law under which leases can be obtained from the United States. One holding a valid unpatented claim under the mining laws is not prohibited by such laws from leasing his claim for its development. I am informed that large areas of the lands are now claimed under placer mining locations, but patents have not been applied for or granted.

Concluding, I might also call attention to the provisions of the mining laws with respect to claims held by location, which require that on a claim there must be labor performed by improvements made annually of not less than $100 in value, until patent issues, else the claim becomes subject to relocation, and as a consequence all the rights of the original locator may be forfeited and lost. While locations under the placer mining laws have been made of these lands, the question as to the applicability of such laws to deposits of oil shale has not been directly presented to the Department for decision, and consequently, an authoritative ruling on the matter has not been made. The general leasing bill now pending in Congress contains provision for leasing oil shale lands on terms designed to encourage their development. . . .

Exhibit C-410. July 22, 24, and 26, 1919, Hearings before the House Committee on Mines and Mining on H. J. Res. 150, "Joint Resolution To Suspend the Requirements of Annual Assessment Work on Mining Claims During the Year 1919 (pp. 16-17, 18):

Mr. TAYLOR. . . .

Now, gentlemen, in conclusion, if you report out the resolution at all you ought to, in my judgment, do two or three things: First, reduce the number of claims that can be exempt, and not allow any man or set of men to hold a large group of claims without developing or doing anything on them. Second, if you are going to pass this bill, I think you ought to include the oil-placer claims, and treat all of them alike. We have got more oil-shale placers in my State than in any other State in the Union. That is where the great oil-shale locations of this country are, not only in my State, but in my congressional district and in my own home county. I have got more oil shale in Garfield County in which I live than there is in 40 or 45 other States of the Union, all put together; and if you are going to let them go on with assessment work let my people go along with the rest of them. Third, if you decide to favorably recommend the bill with any limit as to the number of claims that anyone may hold without doing any work on them you ought to require every owner to pay into the county treasury $10 apiece for each claim that he claims exemption for.

Mr. KINKAID. Now, when it comes to oil shales, isn't it more important right there—that is, doesn't that emphasize the importance of restricting the number of claims or limiting the number of claims that may go without assessment work?

Mr. TAYLOR. Yes; I think there are some parties who have located and are holding hundreds of those oil-shale claims in my district and have never yet done any assessment work on them.

Mr. KINKAID. Isn't there some big concern that has got perhaps thousands of them?

Mr. TAYLOR. I don't know how many. I know of one corporation that is holding a very large number of mining claims, I think over 200.

Mr. BURKE. How many have you got in your district, developed and in operation at the present time, in Colorado?

Mr. TAYLOR. What kind of claims?

Mr. BURKE. Oil-mining placer claims.

Mr. TAYLOR. Not very many that are developed. Very few producers. As the gentleman said (Mr. Howard), they haven't yet discovered a satisfactory process of handling oil shale on a large scale that can compete with the flowing oil wells. That is something that will come after awhile, but they haven't gotten it developed yet.

Mr. TAYLOR. You know we have got an oil and coal leasing bill pending before the Committee on Public Lands. I am a member of that committee and we are going to report it out, I think, before a great while, and that limits the amount of oil-shale land that any one person can be interested in, directly or indirectly, to 5,600 acres. No corporation or stockholder can be interested in more than one such group of claims, aggregating 5,600 acres, and Dr. Manning, the Director of the Bureau of Mines, says that he thinks that a reasonable amount, because you have got to spend about $2,000,000 at least on a plant, and he and the Interior Department are willing to go that far to encourage development. We are going to provide for very liberal leases, but I don't think there will be very much opportunity for monopoly of large tracts, although there is a clause in the bill that if the owners fully comply with the law they have got the right to proceed to patent. . . .

Exhibit C-100. August 5, 1919, Letter to Representative James T. Begg from First Assistant Secretary of the Interior Vogelsang (p. 2):

. . . the general mining laws. These provide that an individual may locate 20 acres of mineral land upon the discovery of mineral, hold the claim by performing $100 worth of annual labor thereupon each year, and apply for and obtain a patent when he has expended $500 in development work, paying to the Government $2.50 per

acre for the land. Eight individuals may associate themselves together and include in a single location 160 acres of land.

The oil shale industry is practically untried in the United States and only development will prove whether or not it can be profitably conducted. There are extensive deposits of oil shale in the States named, as well as in some of the other western States.

I direct your attention to H. R. 560, now pending before the House of Representatives, which proposes to authorize the leasing of oil lands by the United States, section 20 of which deals particularly with oil shale.

Exhibit C-20. August 5, 1919, Congressional Record (p. 4279):

Mr. HENDERSON: Mr. President, I am prepared at this time to make a few brief comments on the work of the Bureau of Mines in regard to these experimentations. In view of what the Senator from Utah said the other day as to the scarcity of oil and the likelihood of a shortage within the probably not far-distant future, I had in mind the development of these extensive oil-shale fields in the West, from which I am sure in time we can secure a large amount of oil. However, in view of what the Senator from Utah has just told me—that he has in mind some appropriations for the purpose of carrying on such experimentations—I shall refrain at this time from commenting on that work, and will withdraw the amendment . . .

MR. WALSH of Montana. Mr. President, I rise to inquire of the chairman of the committee if I understand him aright as saying that no practical results have yet been secured from the experimentations for the purpose of devising an economical method of extracting oil from oil shale? . . .

Mr. WALSH of Montana. The Senator made some remarks the other day about the results of the experimentations for the purpose of extracting oil economically from oil shale. Did the Senator say that up to the present

time it had not been shown to be economically practicable?

Mr. SMOOT. Mr. President, I made that statement—that up to the present time there has been no system adopted by which oil could be profitably extracted from the American oil shale.

Mr. WALSH of Montana. The oil shales are an enormous reservoir of oil, are they not?

Mr. SMOOT. Oh, undoubtedly; and I stated to the Senate that in my opinion it would not be many years until a system would be discovered that would successfully extract the oil, and I look for a great production of oil to come from the great shale beds within the United States.

Exhibit G-580, 55-3. September 20, 1919, Letter from J. L. Lindland, Post Office Inspector, to J. E. Connelly, Special Agent, General Land Office, Denver, Colorado (p. 1):

I am in receipt of your letter of the 18th instand and was very glad to hear from you and that you are now making an investigation of the Western Oil and Shale Land Validating Company with a view to developing fully just what titles this concern, and associated concerns, might have in the lands in Colorado which they have been attempting to sell.

Exhibit C-102. April 20, 1920, Memorandum to the Secretary of the Interior, about the first oil shale patent applications, from the Commissioner of the General Land Office (p. 102):

We now have before us for consideration the first application for patent for oil shale claims, the same being Glenwood Springs 015847 by Verner Z. Reed and James Doyle for fourteen placer claims covering 2240 acres situated in the Naval Oil Shale Reserve No. 1 created by Executive Order of December 6, 1916.

On Departmental sanction, we have written many letters to inquiries stating that, thus far, neither the De-

partment nor any court, so far as we know, has ever held that oil shale lands and deposits are subject to the placer mining laws. It is understood that a very large portion of the oil shale lands in Colorado and Utah are covered by placer claims; some in good faith, probably more otherwise. In fact, we know of one large operation that seems to be entirely fraudulent, and we have heard of many others. Complaint even has been made that the stockmen are taking up these claims to hold the lands for grazing purposes.

The new leasing Act of February 25, 1920, provides for the leasing of oil shale deposits, and provides further (Sec. 21) "that any person having a valid claim to such minerals under existing laws on January 1, 1919" may transmute same into leases. Sec. 37 of the Act provides for the patenting of valid claims under preexisting laws.

Discovery is easy as to those claims that are located along the outcrops. There are doubtless many other claims back from the outcrops on which no discovery will appear. If we patent any oil shale placer claims, the leasing act will be a dead letter as to oil shale for some time. Note the language of Sec. 7 of the oil shale regulations under the leasing act, which were designed not to admit the existence of such a thing as a valid claim under the placer laws.

The matter is deemed of sufficient importance to ask for instructions. Submitted herewith is the report of a Special Agent and Mineral Examiner of this office on these locations, together with the record of the applications.

Exhibit C-103. Instructions, May 10, 1920, "Act of February 25, 1920—Oil Shale Placer Claims", 47 L.D. 548-551:

INSTRUCTIONS.

May 10, 1920.

ACT OF FEBRUARY 25, 1920—OIL SHALE PLACER CLAIMS.

Oil shale having been recognized by both the Department and Congress as a mineral deposit and a source

> of petroleum, and having been demonstrated elsewhere to be a material of economic importance, lands valuable on account thereof must be held to be subject to valid location and appropriation under the placer-mining laws to the same extent and subject to the same provisions and conditions as if valuable on account of oil or gas.

VOGELSANG, *First Assistant Secretary:*

The Department is in receipt of your [Commissioner of the General Land Office] memorandum dated April 20, 1920, stating that your office has before it for consideration the first application for patent for oil shale placer claims, the same being Glenwood Springs mineral entry 015847 by Verner Z. Reed and James Doyle for fourteen placer mining claims covering 2,240 acres now situate in Naval Oil Shale Reserve No. 1, created by Executive order of December 6, 1916.

You refer to the provisions of the leasing law of February 25, 1920 (41 Stat., 437), relating to oil shale deposits, and state that you deem the matter of sufficient importance to warrant its submission for instructions of the Department.

The entry in question was allowed February 25, 1919, for the La Paz Nos. 1 to 14, inclusive, placer mining claims, survey No. 19837, situate in what, if otherwise surveyed would be part of Secs. 14 to 20, inclusive, 22, and 23, T. 6 S., R. 95 W., 6th P. M., Parachute mining district, Glenwood Springs, Colorado, which claims purport to have been located November 14, 1912, on account of "petroleum and other mineral oils, oil shales, hydrocarbons and related materials," each by eight persons.

By section 2319 of the Revised Statutes it is provided that:

> All valuable mineral deposits in lands belonging to the United States, both surveyed and unsurveyed, are hereby declared to be free and open to exploration and purchase, and the lands in which they are found to occupation and purchase, by citizens of the United States and those who have declared their in-

> tention to become such, under regulations prescribed by law, and according to the local customs or rules of miners in the several mining districts, so far as the same are applicable and not inconsistent with the laws of the United States.

And by the act of February 11, 1897 (29 Stat., 526), it is provided:

> That any person authorized to enter lands under the mining laws of the United States may enter and obtain patent to lands containing petroleum or other mineral oils and chiefly valuable therefor, under the provisions of the laws relating to placer mineral claims.

Oil shale has long been recognized as a valuable mineral deposit and for many years the mining of such deposits and the distillation of petroleum and other mineral substances therefrom has been an extensive industry in Scotland, that has afforded employment to many people and produced large dividends. While there are no oil shale op :ations in the United States that have reached that point of commercial development or production, a reference to departmental publications indicates that there is great activity, particularly in the States of Colorado, Utah, Montana, Nevada, and California, looking to such development and production at places where there are large and easily accessible deposits of rich oil shale, and that some shale oil has been produced. It is reported that several small plants have been already completed, or are under construction, near DeBeque, Colorado, which is only a short distance from the land included in the entry of Reed and Doyle.

The Department has had numerous inquiries as to the locatability and patentability of such deposits under the mining laws and in response thereto, while disclaiming any intention of expressing a binding opinion in the premises, it has nevertheless declared itself as favorable to the view that such deposits, if valuable, are subject to location and purchase under the mining laws. In a letter dated May 16, 1916, addressed to Senator Myers the Department said that:

> * * * it would seem that a discovery by competent locators, locating in good faith, of oil shale, upon the unreserved, unappropriated and unwithdrawn public domain, capable, by approved methods, of yielding oil in sufficient quantities so as to make the land chiefly valuable therefor, would be a sufficient compliance with the provisions of said oil placer act of 1897, and that localities based upon such a discovery must be made and entered, if at all, under the provisions of said act of 1897.

In a letter dated December 26, 1917, addressed to Representative W. A. Ayers, it was said:

> Large areas of land in Colorado, Utah, and Wyoming have been classified by the Department as mineral land valuable for oil shale. The lands so classified, except two small areas, one each in Colorado and Utah which have been set aside as naval oil shale reserves, are open to mineral entry under the mining laws of the United States and to nonmineral entry in accordance with the provisions of the act of July 17, 1914, the shale deposits when entries are made under this act being reserved for separate acquisition under the mineral land laws.

In a letter dated April 11, 1918, addressed to Mr. Fred L. Morris, Lawrence, Kansas, it was said that:

> * * * if these deposits of oil shales are valuable they are now subject to location and entry under the mining laws by citizens of the United States.

And in a letter dated June 30, 1919, addressed to Mr. Hal P. Wilson, Detroit, Michigan, it was said:

> The lands included in Naval Oil Shale Reserve Colorado No. 1 and Utah No. 2 were withdrawn from appropriation and reserved for the United States Navy, and are not subject to location or the acquirement of any rights under the United States public-land laws while the withdrawal remains in force. If valid claims have been initiated prior to the withdrawal and have been maintained in accord-

ance with law, they are protected under the terms of the withdrawal act of June 25, 1910 (36 Stat., 847), but I am not advised as to whether any portions of the withdrawn lands are so held.

In the letter of the Director of the Geological Survey of May 23, 1916, addressed to you and advising you of the classification of certain areas, including that embraced in the said entry of Reed and Doyle, the Director said:

> The net result of oil shale investigations already made is that the oil-shale areas in Colorado, Utah, and Wyoming constitute a latent petroleum reserve whose possible yield is several times the estimated total remaining supply of petroleum in the United States.
>
> While the data at hand are not sufficient to warrant a specific statement as to the total recoverable nitrogen content of these shales, it is believed possible that this will prove so large as to give these deposits a value as a source of nitrogen equal to their value as a source of petroleum.
>
> In view of the high prospective mineral value of lands underlain by oil-shale deposits it is, of course, apparent that they should not be permitted to be acquired under the nonmineral land laws. The lands have not been recommended for withdrawal because the oil-shale industry is not yet developed in the United States, and is it is desired to give opportunity for the establishment of experimental plants, it is believed the lands should remain open for the present to acquisition under the mineral-land laws, even though they are ambiguous and but poorly adapted to deposits of this type.
>
> Accordingly, I hereby classify the tracts listed below as mineral lands, valuable as a source of petroleum and nitrogen, and request that you make the proper notation of the classification upon your records.

Such classifications of lands containing oil shale have been accepted by the Department as *prima facie* evidence

of the value of the lands so classified for mining purposes so as to acquire agricultural entrymen therefor to accept restricted patents to their claims under the provisions of the act of July 17, 1914 (38 Stat., 509), or assume the burden of establishing their nonmineral character.

In his letter of November 15, 1916, transmitting to the Department a proposed Executive order for the creation of Naval Oil Shale Reserve No. 1, Colorado No. 1, embracing approximately 45,400 acres, and including the land applied for by Reed and Doyle, the Director of the Geological Survey said: "The Colorado area is near transportation, and includes a part of the richest of the known shale deposits."

By section 37 of the leasing act of February 25, 1920, it was provided:

> That the deposits of * * * oil, oil shale, and gas herein referred to, in lands valuable for such minerals. * * * shall be subject to disposition only in the form and manner provided in this act, except as to valid claims existent at the date of the passage of this act and thereafter maintained in compliance with the laws under which initiated, which claims may be perfected under such laws, including discovery.

Oil shale having been thus recognized by the Department and by Congress as a mineral deposit and a source of petroleum, and having been demonstrated elsewhere to be a mineral of economic importance, lands valuable on account thereof must be held to have been subject to valid location and appropriation under the placer mining laws, to the same extent and subject to the same provisions and conditions as if valuable on account of oil or gas. Entries and applications for patent for oil shale placer claims will, therefore, be adjudicated by your office in accordance with the same legal provisions and with reference to the same requirements and limitations as are applicable to oil and gas placers.

The record of the entry accompanying your memorandum is returned for such adjudication.

Exhibit C-105. May 25, 1920, Memorandum for Division "N" from Commissioner, General Land Office (pp. 1-2, 4, 5):

November 11, 1918 Verner Z. Reed and James Doyle filed M. A. 015847 for the La Paz, Nos. 1 to 14, placer claims comprising 2240 acres described by metes and bounds, in T. 6 S., R. 95 W., 6th P. M., Glenwood Springs Land District, Colorado, upon which final certificate issued February 25, 1919. The lands are included within the limits of Naval Oil Shale Reserve No. 1, created by Executive Order of December 6, 1916. The lands were located for the development of oil shale deposits contained therein.

Under date of November 9, 1918 a report was submitted on this application by a special agent and a mineral examiner of this office. It is reported that the locators named in the location notice, dated November 14, 1912, namely, E. Tyler Smith, W. F. Schuyler, O. H. Shoup, James Doyle, C. A. Fisher, B. H. Hopkins, K. C. Schuyler and R. S. Hiltner, are men prominently associated with the oil business in Wyoming. Prior to the location of the group, the locators expended thousands of dollars in an examination and testing of these oil shales and getting reports on the methods of extraction as practiced in the oil shale regions of Scotland. On the strength of reports submitted by eminent geologists and chemists employed, the locations were made and the assessment work performed by the original locators for the years 1913 and 1914. The investigation indicates that each of the original locators had a real interest in the locations and believed in the prospective commercial value of these oil shales. . . . On May 10, 1920, the Department returned the entry record for adjudication, holding: . . . In view of this holding and instruction and the reports of the field men, showing discoveries and expenditures as required by the statutes, that the locations were made prior to the withdrawal by bona fide locators and were either perfected prior thereto or work was being prosecuted diligently to that end at the date of withdrawal, the case is clearlisted and closed as to

the Field Service Division and referred to Division "N" for action on the record.

/s/ [Illegible]
Commissioner.

Board of Law Review,

By /s/ [Illegible]

Exhibit C-106. August 5, 1920, Letter to Senator Lawrence C. Phipps from Secretary of the Interior John Barton Payne (p. 1):

Answering your inquiry as to whether decision by First Assistant Secretary in the case of the Reed Doyle oil shale placer mining claims has my approval, I have to advise you that the decision in question was prepared after careful study of the mining laws and decisions by the legal force of this Department, and in the unanimous opinion of that force was the only conclusion which could be reached under the law and the facts. No reasons have been presented to me which would warrant the view that the conclusion was incorrect.

Exhibit G-522. March 2, 1921, Letter to G. H. McCormigh, Lovelock, Nevada, from First Assistant Secretary of the Interior Vogelsang (p. 1):

. . . In the opinion of the Department . . . with respect to oil shale, a discovery would mean that uncovering or exposure of a deposit of oil shale in sufficient quantity and of sufficient value to warrant a person of ordinary prudence in the development and exploitation of the property for the purpose of producing oil and other by-products from the shales. . . .

Exhibit C-211. April 25, 1921, Supplemental Report to Commissioner, General Land Office, from Mineral Examiner Oral J. Berry (p. 1):

This supplemental report is attached to furnish your office further information relative to Dr. R. D. George.

Dr. R. D. George has been State Geologist of Colorado for several years and is one of the best posted men in the state with regards to the mineral resources and a recognized authority on oil shale. A report from Dr. R. D. George can be relied on. . . .

Exhibit C-311-L. April 21, 1926, Report to Commissioner, General Land Office, on the Mountain Boy claims, from Inspector G. M. Kintz (pp. 1, 42):

APPROVED

/s/ Ralph S. Kelley
Division Inspector
4/1/27

. . . .

With regard to Mountain Boy Nos. 6 and 7, there appears to have been made a good discovery of minerals. . . .

Exhibit C-349. March 7, 1927, Letter to Secretary of the Interior from Commissioner, General Land Office (pp. 1-25):

It appears that practically all the oil shale area in Colorado is covered by mining locations made prior to the passage of the leasing act of February 25, 1920 (41 Stat., 437). For several years examination of such locations has been conducted in the field regardless of whether applications for patent had been filed or not, in order to ascertain their validity. Many reports of such investigations have been received indicating that many of the locations have no validity but in certain instances effort is being made to hold possession of the lands under the mining laws. In a number of the cases it is reported that little or no effort is being made at present to prop-

erly maintain the claims by the performance of the required assessment work. Of course, unless the claims are shown to be valid and that the requirements of the mining laws have been met, the lands involved would be released therefrom and be subject only to the provisions of the leasing act. Is is probably because of this situation that most of the locators will endeavor to maintain their claims under the mining laws in order to eventually get a patent therefor.

The question of the advisability of examining all oil shale locations in the field where no application for patent has been made nor any complaint filed against the same or where no application for lease or otherwise for the land has been filed has arisen. . . .

The situation is called to your attention with the request that instructions be given by you as to the examination of the claims mentioned and as to the procedure that may be properly followed to declare the claims invalid if the evidence so warrants.

Exhibit C-350. May 31, 1927, Letter of Instructions to Commissioner, General Land Office, from First Assistant Secretary of the Interior E. C. Finney (pp. 1-2):

I have your request for instructions in the matter of oil shale claims (March 7, 1927, A. — C.A.O.)

After careful consideration, it is the judgment of the Department that all oil shale location of record should be examined and reported upon by inspectors of this Department. The Navy has requested that this be done with respect to all locations within the exterior limits of the naval oil shale reserves.

On the unreserved public domain it seems advisable that this course be pursued for numerous reasons. The Department believes that *bona fide* claims, regularly located and maintained in accordance with law, should be protected and be allowed to proceed pursuant to the provisions of the law under which initiated, and section 37 of the leasing act. Paper locations and locations not maintained as required by law constitute a cloud upon the public lands and interfere with their proper use and

disposition. Moreover, as time goes on, it may be more and more difficult to ascertain and establish the fact surrounding locations and the work performed by the locators and their successors in interest, or failure to perform work as required by law.

It seems important, therefore that the examination be made as soon as practicable and the facts ascertained be made of record and available to the Department through the inspectors' reports.

It is therefore directed that the division inspector be instructed to proceed to examine and submit reports upon all claims of record within the area described. Where the reports are adverse and proseedings against the locations are contemplated, the propriety of proceeding immediately, or waiting until an application for patent has been filed, or the protest submitted, may then be considered and further instructions asked for and received from the Department.

In order to expedite this work, both in the interest of *bona fide* claims, and in the interest of the Government as to claims not valid, an effort will be made to give the division inspector additional assistance for field work in the near future.

Freeman v. *Summers, United States, Intervener (On Rehearing)*, 52 L.D. 201 (1927):

FREEMAN v. SUMMERS, UNITED STATES, INTERVENER (ON REHEARING)

STANDARD SHALES PRODUCTS COMPANY v. SUMMERS, UNITED STATES, INTERVENER (ON REHEARING)

Decided September 30, 1927

MINING CLAIMS—MINERAL LANDS—OIL-SHALE LANDS—DISCOVERY.

The discovery of an isolated bit of mineral, not connected with or leading to substantial prospective

values, is not a sufficient discovery to validate a location under the mining laws, but it is sufficient if mineral is found in a mass so located that the vein or mineral-bearing body can be followed with reasonable hope and assurance that a paying mine can be ultimately developed.

MINING CLAIM—MINERAL LANDS—OIL-SHALE LANDS—DISCOVERY—EVIDENCE.

Where there has been an actual discovery of mineral either on the surface or in shallow workings within the limits of an asserted mining location, and the deposits of the region have been the subject of exploration and study for a number of years, evidence bearing upon the mineral value and the geological formation of the adjacent lands may be considered in determining whether the located lands are chiefly valuable for their mineral contents.

MINING CLAIM—MINERAL LANDS—OIL-SHALE LANDS—DISCOVERY—PATENT.

It is not necessary, in order to constitute a valid discovery under the general mining laws sufficient to support an application for patent, that the mineral in its present situation can be immediately disposed of at a profit.

OIL-SHALE LANDS—MINING CLAIM—MINERAL LANDS—DISCOVERY—GEOLOGICAL SURVEY—EVIDENCE

The rule as to the thickness and oil content adopted by the Geological Survey in its regulations of April 3, 1916, for the classification of lands with respect to their oil-shale character, was not intended to be applied by the department as a yardstick in determining whether the physical exposure of an oil-shale deposit within the limits of an asserted oil shale placer mining location is sufficient to constitute an adequate discovery of mineral under the mining laws, but each case presented must be determined upon the facts there disclosed.

WORK, *Secretary:*

On May 10, 1920, George L. Summers made application 018825 for enlarged homestead entry covering S. ½ N.W. ¼, N. ½ SW. ¼ Sec. 1, and S. ½ NE. ¼, N. ½ SE. ¼ Sec. 2, T. 5 S., R. 97 W., Glenwood Springs land district. On the same day he made application 018827 for additional stock-raising entry covering lots 3, 4 S. ½ NW. ¼ Sec. 2, and lots 1, 2, 3, SE. ¼ Sec. 3, in the same township and range. Application 018825 was allowed May 17, 1920, with mineral reservation, and application 018827 on January 28, 1921. Combined final proof was submitted May 22, 1923. A protest against the enlarged entry was filed by the Standard Shales Products Company alleging a superior right to the tracts in Sec. 1 by virtue of the ownership and possession of the Triumph No. 22 and Triumph No. 23 placer mining claims initiated by location April 5, 1918. A like protest was filed against the entry of the remaining lands by J. D. Freeman based upon alleged ownership and possession of the F. D. No. 7 and J. D. Nos. 1, 2, 3, and 5 placer mining claims initiated by location April 1, 1918, and covering the remaining tracts in Summer's entries. By decision of December 20, 1924, these protests were dismissed and the mining claims held to be null upon the grounds that on February 25, 1920, the date of the approval of the leasing law, no discovery of a valuable deposit of oil shale had been made upon any of these claims as alleged, nor was there at that date diligent prosecution of work leading to discovery. These decisions were affirmed on motion for rehearing and retrial May 23, 1925.

The contestants thereafter filed a petition for the exercise of supervisory authority.

By decisions of July 29, 1925, the department favorably entertained the petitions and authorized further hearing at the local land office between the parties, the Government, represented by inspectors, being allowed to intervene. The record made at said hearing, with briefs and arguments of the parties, has been given extended considerations.

The contestants advance the proposition that the Green River formation, at least an area thereof bounded by

Green River on the east, the Colorado River on the south, Brush Creek on the west, and Piceance Creek or White River Divide on the north, and within which boundaries these claims are located, is one massive homogeneous deposit of like mineral, easily identifiable by fossil insects; that it is one stratum, one bed, from its base to its topmost reaches, a vertical distance of from 2,700 to 2,800 feet; that all sections of a stratigraphic column of this formation contain either shale, sandy shale, shale sand, or sand that will yield oil upon destructive distillation; that in the light of latest information and engineering research and opinion the feasible method of mining will involve and dictate the mining of all the shale from the base of a rich bed, known as mahogany bed, to the exposures of shale upon the land; that the various deposits of sandstone upon the land in question are but thin partings, which have some oil content; that the whole body, therefore, will be commercially developed and is all valuable, and discovery of any oil shale upon the land, being a part of the integral mass that lies below it, is a sufficient discovery to satisfy the requirements of law.

Before proceeding with further discussion of the matter, reference is made to certain regulations of the Geological Survey relating to the classification of oil-shale land quoted in previous decisions of this department, to the effect that where shale beds are too deep to be mined by open-cut methods, such lands must contain shale capable of yielding 1,500 barrels of oil per acre in beds not less than 1 foot thick, yielding 15 gallons per ton, and within a reasonable depth below the surface. Second, that where the shale beds are sufficiently near the surface to be mined by open-cut methods, the lands must contain shale sufficient to yield 750 barrels of oil per acre in beds not less than 6 inches thick, and yield not less than 15 gallons per ton.

The impression appears to have become general that these regulations were to be used as a yardstick, with which the department would determine in all cases whether sufficient discovery to warrant the issuance of patent therefor under the mining laws had been made. An endeavor to correct this impression was made in a

subsequent communication relative to the rehearing in this case, and later by a letter signed by the Secretary of the Interior, explaining that such was not the purpose of the department, and that each case presented must be determined upon the facts there disclosed.

Section 2320 of the United States Revised Statutes provides that—

> No location of a mining claim shall be made until the discovery of a vein or lode within the limits of the claim located.

Section 2329, with reference to placer claims, in which category oil-shale beds fall, provides that placer claims shall be subject to entry and patent—

> under like circumstances and conditions or upon similar proceedings as are provided for vein or lode claims.

It is a statutory requirement, therefore, that no location of a placer mining claim shall be made until the discovery of minerals within the limits of the claim located.

The general rule of the department as to what constitutes a sufficient discovery within the limits of a lode mining claim was laid down in the case of *Costle* v. *Womble* (19 L.D. 455, 457), and has since been followed.

> * * * It is my opinion that where minerals have been found and the evidence is of such character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success in developing a valuable mine, the requirements of the statute have been met.

In *Kern Oil Company* v. *Clotfelter* (30 L. D. 583, 587) the department held:

> * * * The evidence bearing upon the mineral character of the land selected should not be restricted to mineral discoveries or developments upon these lands and to their geological formation, but may extend to the discovery and development of mineral on adjacent lands and to their geological formation.

See, also, in this connection *Jefferson-Montana Copper Mines Company* (41 L. D. 320).

In the *Oregon Basin Oil and Gas Company case* (50 L. D. 244; 258) the department denied an application for placer patent for lands alleged to contain valuable deposits of oil and gas, on the ground of failure to show sufficient discovery. Slight discoveries of gas or oil had been made in shallow wells in shale or sand near the surface, and it was contended that this warranted a prudent man in going further with a reasonable expectation of finding valuable oil deposits at depth. The department concluded in that case that the showing presented (p. 252)—

> fails to satisfactorily establish that in either of the wells drilled on the claim there was encountered any formation carrying oil or other mineral in sufficient quantity to impress the land with any value on account thereof, while, on the other hand it is conclusively made to appear that the formations from which oil values are expected to be developed within the limits of the claim exist many hundred feet below, and are wholly unconnected with, the formations penetrated in said wells.

From the foregoing it follows that the law requires as a prerequisite to a valid location that mineral be discovered within the limits of the claim located; that the mineral indications shall be such as to warrant a prudent man in the further expenditure of time and money, with a reasonable prospect of success. In order to warrant that proceeding, he must have discovered mineral in such situation and such formation that he can follow the vein or the deposit to depth, with a reasonable assurance that paying minerals will be found. In other words, the discovery of an isolated bit of mineral, not connected with or leading to substantial prospective values, is not a sufficient discovery; but a mining locator is not expected to find at the surface or in a shallow working a body of mineral which can be immediately mined and reduced at a profit. It is sufficient, as already stated, if he finds mineral in a mass so located that he

can follow the vein or the mineral-bearing body, with reasonable hope and assurance that he will ultimately develop a paying mine.

In this case it appears from the evidence submitted at the original hearing and rehearing that actual discoveries of mineral were made either on the surface or in shallow workings. The existence of oil shales in northwestern Colorado is a matter of common knowledge, and the deposits have been the subject of exploration and study for a number of years.

In 1923 the Geological Survey of this department published Bulletin No. 729, relative to the oil shales of the Rocky Mountain region. It was stated on page 21 of this bulletin—

> By far the most extensive and rich oil shales of the United States, and perhaps of the world beyond to the Green River formation of Colorado, Utah, and Wyoming.

On page 36 it is stated—

> The youngest sedimentary rock in the Piceance Basin belong to the Green River formation, which also carries most of the oil shales. * * * The Green River formation is the surface rock over the entire interior part of the Piceance Creek Basin. * * * Interbedded with the rich oil shale are beds of lean and almost barren shale and sandstone of varying thickness.

On the same page it is stated—

> The presence or absence of rich oil yielding shales permits a division of the Green River formation into three members * * * The upper member is composed largely of soft shales with some sandstone, and includes but few beds of rich oil yielding shales. The middle member almost everywhere along its outcrop includes beds of rich oil shales which in some places have a great aggregate thickness, and which are everywhere extremely presistant and stand out in relief.

There have been filed with the department photographs and other exhibits, descriptive of this Green River forma-

tion, and which support the allegations of contestants as to its presence in the immediate area in which these particular claims are located.

The oil-shale deposits of the United States have, as heretofore stated, been well known for a number of years, and have been the subject of much exploration, study, and investigation. They have been recognized by the department and by Congress as a very valuable natural mineral resource. They have been the subject of treatment in a large number of experimental reduction plants, one of which was provided for by Congress and is now in operation.

While at the present time there has been no considerable production of oil from shales, due to the fact that abundant quantities of oil have been produced more cheaply from wells, there is no possible doubt of its value and of the fact that it constitutes an enormously valuable resource for future use by the American people.

It is not necessary, in order to constitute a valid discovery under the general mining laws sufficient to support an application for patent, that the mineral in its present situation can be immediately disposed of at a profit. As stated by the department in the case of *Narver* v. *Eastman* (34 L. D. 123, 125)—

> * * * It does not follow that because there is no clear profit arising from the sale of an article that has been manufactured or produced that it therefore has no commercial value. Take for example the farmer. In the course of husbandry it frequently happens that different crops raised by the farmer when put in market do not sell for enough to pay the costs of their production and transportation, but can it be truly said that said crops have no commercial value simply because after the same have been sold and all expenses incident to their production and shipment deducted, there is no clear gain to the farmer, and therefore, as a corollary, that the lands are not valuable for agricultural purposes? And the same may be said as to the entry under this act of land valuable "chiefly for stone." Could not the land be valuable chiefly for stone even though, because

of its remoteness from market or other causes, the stone could not then be sold for a remunerative price?

The evidence in this case shows that in this particular area of Colorado the lands contain the Green River formation, and that this formation carries oil shales in large and valuable quantities; that while the beds vary in the richness of their content, the formation is one upon which the miner may rely as carrying oil shale which, while yielding at places comparatively small quantities of oil, in other places yields larger and richer quantities of this valuable mineral.

In other words, having made his initial discovery at or near the surface, he may with assurance follow the formation through the lean to the richer beds.

There can be no question whatever as to the greater value of the lands for their oil-shale deposits than for other purposes. Their agricultural value is negligible; their value for grazing purposes is nominal, and the real and principal value is the mineral deposit.

After careful consideration of the entire record the department has reached the conclusion that the locations are valid and, if otherwise regular, are entitled to pass to patent under the general mining laws. Prior departmental decisions in this case are accordingly recalled and vacated, the decision of the Commissioner of the General Land Office affirmed, and the homestead entries 018825 and 018827 of George L. Summers held for cancellation, because made upon lands covered by prior valid mineral locations.

Motion sustained.

Exhibit C-274. Annual Report of the Secretary of the Interior for the Fiscal Year Ending June 30, 1927 (pp. 29-30):

OIL SHALE

One of the important subjects before the department during the year was that of oil shales, immense areas of which exist in Colorado, Utah, and Wyoming. Prior

to February 25, 1920, these deposits were held to be subject to location and entry under the placer mining laws. On that date Congress passed the general leasing act, which repealed the placer mining laws as applicable to such deposits, and provided that thereafter they would be subject to disposition only through lease. One of the concluding sections of the act, however, provided "that valid claims existent at date of passage of this act, and thereafter maintained in compliance with the laws under which initiated" might be perfected under the prior existing laws. Those prior laws required the claims to be located, a valuable deposit of mineral discovered, that not less than $100 worth of labor or improvements be placed upon the claims each year, and that as a prerequisite to patent not less than $500 should have been expended upon or for the development of each location.

Immediately prior to the enactment of the leasing act, numerous locations were made upon the shale areas under the placer mining laws, and many of these locations have been followed by applications for patent. It became the duty of the department to consider these claims and to determine whether the locators had complied with the requirements of the general mining laws. A public hearing, attended by many people interested, was held in the department on December 1, 1926, and the subject was thoroughly discussed. Following this hearing, after extended consideration by the department, decision was rendered in the case of Freeman et al. v. Summers, involving, primarily, the question of what constitutes sufficiency of discovery upon certain shale placer mining claims. The department applied the long-established rule that when the locator had discovered mineral within the limits of his claim in a situation and formation that the vein or deposit could be followed to depth, with reasonable assurance that paying minerals will be found, such discovery may form the basis of a patent, where compliance with the law has been had in other respects.

Field investigation is being made of all shale claims, to the end that valid rights may be protected and permitted to be perfected, but that invalid claims, where compliance with the laws has not been had, may be

eliminated and canceled. Many difficult questions of law and of fact necessarily arise in these cases, and while general rules of law may be applied, the facts of each case, as disclosed by investigation and evidence, must govern the department in the disposition of the cases.

Exhibit C-351. May 7, 1930, Memorandum for the Secretary of the Interior from Commissioner, General Land Office (pp. 1-2):

> After the leasing law was enacted, the matter of disposing of the oil shale deposits and the lands containing the same, presented a situation that required close study. It was decided that the claims should be investigated in the field for the purpose of determining whether or not they were bona fide claims existing at the date of the act, and also whether they had been maintained in accordance with the mining laws. These investigators have since been carried on and charges preferred against such locations as were reported to be invalid for any cause, such as, lack of discovery, dummy locators and failure to perform annual assessment work, and where applications have been filed failure to perform the required patent expenditures. . . .
>
> With a view to expediting final action in these oil shale cases for the protection of the interests of all concerned, the Commissioner of the General Land Office has recently augmented the field force assigned to this work and in addition thereto has enlisted the cooperation of the surveying service. . . .

Exhibit C-321. Report of the Assistant Attorney General [Seth Richardson] in Charge of the Examination in to the Charges of Ralph S. Kelley Respecting the Administration of Oil Shale Lands, as Submitted to the Attorney General on October 24, 1930 (pp. 48, 165-167):

It may be fairly said that the decision of the Secretary of the Interior in the Freeman-Summers case is with its surrounding developments, the high spot of Kelley's attack upon the Department of the Interior. . . .

Having in mind the charge that the present administration has been letting down the bars in favor of oil companies and oil shale claimants, I beg to call attention, in closing, to one additional significant circumstance.

When the Supreme Court in the Krushnic case held, in effect, that where a claimant had failed to perform yearly assessment work but had recommended his assessment work before challenge by the government or anyone else, his previous failure to perform such work was cured, and was no longer the basis for an attack upon his ultimate right to patent,—such decision smashed a long existing Executive interpretation of the law on the part of the Interior Department. It was a stunning defeat for the government, and not a victory, as Kelley claims. As soon as this decision was rendered the Interior Department endeavored to save as much as possible from the wreck, and although Kelley now charges that the Interior Department at that very time was "paralyzing the Field Service" by friendly rulings in favor of oil companies, the unbiased record presents the encouraging spectacle of *the most extraordinary effort* being initiated on the part of the Interior Department, under the directions of Secretary Wilbur and his subordinates, to take advantage of the one loophold left in the Supreme Court's opinion, that if the failure to do assessment work was *actually challenged* by the government *before* work was recommended, the Department might still maintain an attack upon the claim. To effectuate this salvage, so-called, Secretary Wilbur put into the Field every available man and directed Kelley to proceed to post every claim in connection with which there was any idea of a contest against the claim by the government; and the Department and Kelley cooperated to the utmost extent in carrying on this work,—a work which, it is at once apparent, Secretary Wilbur and the Department would not at all have been interested in *if their hearts had been with the oil companies and against the government.* It furnishes a final, up-to-date illustration of the correctness of the conclusion which presents itself to me, in closing, that the oil shale lands of the

United States are being vigorously and honestly administered by Secretary Wilbur and his Department.

Exhibit C-407. November 6, 1930, Letter to Rep. Dan B. Colton, Chairman, House Committee on Public Lands from Secretary of the Interior Ray Lyman Wilbur (pp. 1, 4-5):

Prior to February 20, 1920, unreserved public lands of the United States containing deposits of oil shale were subject to location, application, and entry under the provisions of the general mining laws and particularly those sections covering placer mining claims. See Instructions of First Assistant Secretary Volelsang, May 10, 1920 (47 L.D. 549)....

The specific question as to assessment work discussed above is, of course, only part of the general problem as to oil shale lands and it may be that other phases of it now covered by legislation, such as the questions of discovery . . . will impress you as requiring legislative definition.

Exhibit C-320. Consolidated Hearings before the House Committee on Public Lands, 71st Cong., Second and Third Sessions, "*Applications for Patent on Oil-Shale Lands*", 1930-1931 (pp. 36-37, 99, 121-123, 170, 181):

Mr. POTTER. That statement presents the matter exactly as I would state it myself. That is exactly the situation in Colorado. Now, the thing that I would like to say to you gentlemen is this: This is not the first time I have been before this committee in connection with shale. I personally attended a meeting of the Public Lands Committee of the House on February 26, 1918, and we came before the committee on that day because a few days before we had had a hearing before First Assistant Secretary Vogelsang of the Interior Department. A question had been raised by the department as to whether shale lands were subject to location under the placer mining law, and we were very anxious to know

about it. Many of us had made locations, in fact many people all over Colorado and Utah had done so, and the question was whether these locations would be recognized at all. The leasing bill was being considered and we thought at that time it would probably be acted upon favorably very shortly, so we came down here. Mass meetings were held over in the western part of the State and the people declared that they were entitled to liberty or death, and they sent representatives down here to tell somebody about it. I did not happen to belong to any of those groups. However, we did have a meeting in Denver, and a number of attorneys and engineers came down here to be heard before the Secretary as to the character of these claims and as to whether they were properly subject to location under the leasing law, or under the mining law, as were oil claims. At my request Dr. R. D. George, our State geologist, and Mr. Arthur L. Pierce, quite an eminent mining engineer from New York, appeared at the hearing to explain the character of the land and its possible production, in order to show that it was subject to the same appropriation as oil land. While we were quite anxious to have these lands recognized as being subject to location under the placer mining law, I was personally more interested in the attitude of the department toward our efforts to develop these shales. That was the main thing. The employment of these different engineers and the expenses of having them here cost me about a thousand dollars. The following men from the department were present at the hearing: Judge E. C. Finney, chief law officer of the Land Department; Dr. George Otis Smith, Director of the Geological Survey; Dr. Van H. Manning, Director of the Bureau of Mines; and Mr. Clay Tallman, Commissioner of the General Land Office. There were also present a number of technologists from the department.

The statement that I made to these gentlemen that morning was that I had been a pioneer all my life. My people took me to Kansas when I was 5 years old and when they still had buffalo out there and we lived in dugouts and sod houses, and the grasshoppers ate up our crops and the hot winds destroyed them until it took

40 years for a homestead to be developed so that people could make a living on it, and I stated that the only reason I was out in Colorado doing anything with these oil-shale lands was because I had been a pioneer all my life and did not have sense enough to do anything else. I did want to know one thing at that time: I wanted to know what policy the department would pursue with reference to oil-shale locations. If it was the policy of the department to oppose such locations, notwithstanding the fact that we made quite a number of locations and had expended considerable sums of money, if they would say frankly that they were going to oppose those locations, I would go back home and abandon every claim we had located and attempt to repay every dollar my friends had put into the enterprise and give up being a pioneer. That was the way I put the proposition up to the Secretary. This may not be of interest to you, but it was of great interest to me at that time, and both Mr. Finney and Mr. Vogelsang assured me that they had a very friendly interest in the development of the shale after we had made the showing of what could be done, and had shown them that only a limited amount of this ground would be appropriated, and that if we were allowed to hold these locations under the general mining law, private enterprise would blaze the trail, pave the way, and make it possible for the Government to develop the remaining shale lands under the leasing law.

Mr. EATON. Was that before or after they had made the naval oil shale reserve over in that territory?

Mr. POTTER. About the same time. I don't know just whether it was before or after. It may have been before. This was in February 1918. Of course, the records will show when the naval oil shale reserve was established. After discussing this matter quite at length, and after a very good showing of the scientific aspects of the oil shale which was a new subject to most people at that time, they agreed with us that it would be well if this small percentage were allowed to be located under the old mining law. We figured that in Colorado some place

between 10 and 15 per cent of the oil shales would be appropriated, and that would leave the remainder of this land subject to be operated under lease, that a way would be found so that when it was necessary to take the oils from the shales it could be done. They were so much impressed with this showing that they asked us to come before your committee. We had not, up to that time, had any notion of coming before the Public Lands Committee. Mr. Finney sat down with Mr. John H. Fry, an attorney from Denver, and myself, and aided us in the preparation of a clause that would except these claims from the operation of the leasing law. We had the assurance of every cooperation from the department, so far as this small amount of shale land which we were locating was concerned . . .

The CHAIRMAN. The point in my mind was along that line. As you know, the oil shale covers vast areas, usually outcroppings in canyons and mountain sides, and the question is whether the $100 worth of work is really needed towards making a discovery.

Secretary WILBUR. Of course, that is, under the law, an evidence of intent, serious intent of continuous work to develop the claim. As a matter of fact, as you say, many of these claims could be discovered with a spy glass, using the ordinary expression. . . .

Mr. SWING. Does the law still operate with reference to a man discovering some new oil shale?

Secretary WILBUR. That would come under the leasing act.

The CHAIRMAN. Oil shale, as I understand it, is now subject to entry under the leasing act, and this legislation only affects those claims that were initiated prior to the passage of the act. . . .

In that connection I have a letter from Mr. D. D. Potter, who has been conspicuous in his advocacy of some of these changes, and in the litigation which has been referred to. He then sets forth his views regarding some of these bills which, with the permission of the committee, I will simply offer. . . .

OCTOBER 20, 1930.

Hon. CHARLES S. THOMAS,
Washington, D.C.

MY DEAR SENATOR THOMAS: I trust that you have reached Washington without serious inconvenience, and that you and Mrs. Thomas are not unduly weary from the long journey.

I am very sorry indeed that I can not be with you since I have thought it might be well to devote a small part of the time at the hearing before the Secretary in acquainting him with some of the historical aspects of the efforts made by Colorado citizens to develop the oil shales.

So far as I am advised the earliest locations of the oil shales under the placer mining law occurred in 1915, and nearly all of the locations made were made in 1917 and 1918. There was a reason for this. The World War was in progress, and while the United States was not yet involved, it was anticipated that we were quite likely to be involved and become associated with the allies against Germany. War materials were in demand and the United States at that time was doing a thriving business in the sale of war supplies to Europe.

In 1913 the Geological Survey sent E. G. Woodruff to Colorado, Utah, and Wyoming to make a reconnaissance survey of the oil shales. E. G. Woodruff and David T. Day published a report on these oil shales in 1914—Bulletin 581A. The activities of Woodruff together with the publication of this bulletin, aroused a lively interest in the oil shales, and when, later, Dean E. Winchester was sent into the field to classify the oil shales, and published a more exhaustive report, the interest became intense. This was followed later by enthusiastic speeches on oil shale by David T. Day in Denver and other places in the West.

In 1917 the United States entered the World War, and the United States Geological Survey, through the State Geological Survey, and otherwise urged the development and production of raw materials necessary to carry on the war.

In 1917 Prof. Russell D. George became very active in the patriotic work of urging citizens of the State of Colorado to develop and produce minerals and oil essential to the successful prosecution of the war. Verner Z. Reed and James Doyle were among the early locators of oil shale and when they applied for patent in 1917 the question was raised as to whether oil shale was subject to location under the placer mining law.

Many locations of oil shale having been made by citizens of Colorado, Utah, and Wyoming, this question created anxiety among the people interested in their locations. Applicants from Colorado asked for a hearing before the Secretary of the Interior and were heard about the 24th or 25th of February, 1918. Assistant Secretary Vogelsang presided at this hearing, and there were present, besides Mr. Vogelsang, Judge E. C. Finney; Dr. George Otis Smith, Director of the Geological Survey; Dr. Van H. Manning, Director of the Bureau of Mines; and Mr. Clay Tallman, Commissioner of the General Land Office. A number of Senators and Representatives from Colorado, Utah, and Wyoming were in attendance at this hearing.

After the hearing the gentlemen above named, representing the Government, urged that the same information which had been given at the hearing before the Secretary should be given to the Public Lands Committee of the Senate and the Public Lands Committee of the House. A hearing was had before the Public Lands Committee of the House on February 26, 1918. A complete record of this hearing appears in the Congressional Record of that date.

After the hearing before the Public Lands Committee of the House the gentlemen who appeared before the Secretary and before the Public Lands Committee of the House were advised that it would be unnecessary to make a further record before the Public Lands Committee of the Senate. These representatives of the oil-shale men of Colorado were advised that the department would cooperate to the end that the oil-shale lands already located under the placer mining law should be

excepted from the operation of the oil leasing law, which was pending before Congress at that time.

The price of crude oil was advancing. The prices which have obtained since 1916 are set forth in the following schedule:

Year	Average price per barrel	Year	Average price per barrel
1916	$1.26	1923	$1.56
1917	1.81	1924	1.64
1918	2.20	1925	1.87
1919	2.29	1926	2.13
1920	3.42	1927	1.38
1921	1.65	1928	1.31
1922	1.68	1929	1.365

Consumption was increasing at a much more rapid rate than it was possible to produce the oil from the ground. An intense drilling campaign was undertaken, but the increase in production did not keep pace with the increase in consumption. The Geological Survey and well-known geologists, including Ralph Arnold and Mr. M. L. Requa, United States oil administrator, freely prophesied the exhaustion of the supply of oil from wells at a comparatively early date.

You will note that the price of oil continued to mount until 1920, when the price reached $3.12 per barrel.

Locations of the oil-shale lands were perfected by patriotic citizens of Colorado, Utah, and Wyoming. A great deal of technical work was undertaken, and the titles to these lands were protected by the performance of annual labor. The oil shale claimant having expended large sums of money in the development of the oil shales sought to interest capital in the production of oil from their shales. A few of the large oil concerns were interested, but not for years after the shale claimants had undertaken the development of this industry.

About six years ago the attitude of the department became antagonistic. Oil-shale claimants, without exception, were charged with bad faith, and it became next to impossible to interest capital in this enterprise because of the attitude of the Government.

Small groups of independent investors were interested in the shales, and small companies were organized for the purpose of providing the funds necessary to patent the lands and develop the oil shale industry. Notably among these small companies is the Standard Shale Products of Lodi, Calif. Mr. Wilson H. Thompson, the president of the First National Bank of Lodi, was the president of this company. His company expended about $180,000, but by reason of bad conditions obtaining in the grape-growing districts of California, his people became discouraged, and when they found themselves opposed by the Government in the case of George L. Summers, v. J. D. Freeman and the Standard Shale Products Co., it was almost impossible to secure the necessary money to defend this litigation and to protect their titles. These people had undertaken the development of this oil shale property in the best of faith and believing it was possible to establish a profitable oil industry. Hundreds and thousands of dollars were expended in an effort to develop these oil shale lands and to establish a profitable industry, following every encouragement offered to them in the beginning by the representatives of the Government. Later, these same men were charged with bad faith by the field department and every obstacle was put in their way, with the apparent purpose of preventing them from perfecting their titles or regaining the money invested in the development of these properties. These properties were all located under the general mining law prior to the enactment of the oil leasing law. . . .

Mr. CONSAUL. There is nothing suggested in this proposed legislation which would do away at all with the subject of discovery.

Mr. LEAVITT. That should be very carefully avoided.

Mr. CONSAUL. In other words, Mr. Leavitt, I take it that you mean that any phrasing of that thought should not make it the sole test for patent?

Mr. LEAVITT. Yes. Otherwise the payment of five of those might be taken to mean sufficient ground for the issuing of patent, regardless of whether there had been discovery. If the discovery does not require the $500 worth of work actually on the ground, possibly the pay-

ment might take the place of that, but if there had not been a discovery, the mere payment of the $500 in annual payments surely should not be made the basis for issuing a patent to a claimant, if there has been no proof that it was oil-shale land.

Mr. CONSAUL. This thought is just suggested, that that $100 payment be credited as part of the patent work. That would have reference solely to the question of work as distinguished from discovery.

The CHAIRMAN. But there should be a proviso that patent shall not issue until discovery shall have been made.

Mr. CONSAUL. That is part of the general mining law, but if this be considered a special codification, it might be well to include that.

. . . .

The specific question as to the assessment work discussed above is, of course, only part of the general problem as to the oil shale lands and it may be that other phases of it not now covered by legislation, such as the questions of discovery and character of proof required on the issue of "bona fides" of a locator, will impress you as requiring legislative definition.

Very truly yours,

RAY LYMAN WILBUR.

The following is the letter of the Secretary of the Interior, of February 6, 1931:

DEPARTMENT OF THE INTERIOR,
Washington, February 6, 1931.

Hon. W. R. EATON,
House of Representatives.

MY DEAR MR. EATON: Referring to your informal request, the following is the latest approximate information relative to oil shale lands:

1. The areas classified by the Geological Survey as oil-shale lands that are shown on maps approved by me May 29, 1930, as being subject to the provisions of Ex-

ecutive order No. 5327 of April 15, 1930, withdrawing public oil-shale deposits and lands containing same for classification, are: Colorado, 1,496,000 acres; Utah, 2,754,000 acres; Wyoming, 4,006,000 acres, a total of about 85,000 acres.

Very truly yours,

RAY LYMAN WILBUR.

Exhibit C-380. H.R. Rep. No. 2537, "Bill Concerning Oil-Shale Lands", Feb. 6, 1931 (pp. 1, 3-4, 5, 6, 7, 9):

The Committee on the Public Lands, to whom was referred H.R. 15002, concerning oil-shale lands, having considered the same, report favorably to the House and recommend that it do pass with the following amendment: . . .

STATEMENT

The general mining laws of 1872 prescribed the manner of initiating and obtaining title to oil-shale lands until the 25th day of February, 1920, upon which day there became effective the general leasing act of 1920 (41 Stat. 437; U.S.C., title 30, sec. 193), which entirely changed the public-land policy of the United States as to all lands valuable for oil shale and the other minerals mentioned in the act. The last section of the act (sec. 37) expressly provided that deposits of oil shale and the other minerals mentioned should be thereafter subject to disposition only under the new leasing system, with an exception, however, in the following words:

> Except as to valid claims existent on February 25, 1920, and thereafter maintained in compliance with the laws under which initiated, which claims may be perfected under such laws, including discovery.

During the first decade of this new leasing policy of the law, numberless disputes and endless litigation have re-

sulted from the interpretation put upon this exception by the officials of the Department of the Interior, resulting in a decision of the United States Supreme Court upon January 6, 1930 (Wilbur v. Krushnic, 280 U.S. 306), upholding the contention of oil-shale landowners concerning the doing of annual labor. . . .

DEPARTMENTAL SUGGESTIONS AND OPINIONS

Under date of November 6, 1930, the Secretary of the Interior addressed a letter to the chairman of the Public Lands Committee of the House (see p. 20), suggesting legislation clarifying uncertainties in the law, and specifically mentioned the following: . . .

> 4. What shall be done with questions of discovery?

After careful consideration of all information available, your committee prepared a substitute for all pending bills, and submits that it clarifies the controversial points in a spirit which is fair to the Government, and at the same time respects every existing valid right now held by any individual claimant. It defines a policy for the guidance of the Department of the Interior, and creates two new requirements not heretofore found in the mining laws, but which appear to be necessary, proper, and advisable for the final disposition of the questions affecting oil-shale lands, only. These changes do not apply to any other class of public lands.

TWO NEW REQUIREMENTS

The first and most important of these new requirements is that every claimant for oil-shale lands must apply for patent on or before July 1, 1934.

Never before in the history of mining law has an owner of a possessory right upon mining lands been required to obtain a patent for his lands. It has always been his recognized legal right to exercise practically all the privileges of fee ownership of mining lands upon

ownership, merely of the possessory mining title. The enactment of the leasing law created an entirely new status for oil-shale lands. No new locations may be made. All old locations are the subject of controversies with departmental officials. The principal controversies have affected hundreds, possibly thousands of claims. The active litigation to settle the controversies has covered six years or more. The first decision of the United States Supreme Court did not support the basic policy of the departmental officials.

Everyone concedes there ought to be some end to the oil-shale questions after 10 years of trouble, and that the Government ought to know who claims oil-shale lands. To meet this suggestion, there was drafted a second new requirement, which is that all those who have not applied for patent but who do claim oil-shale lands shall have until October 1, 1932, to record their claims in the proper land office, by filing an affidavit showing that they have done annual labor upon their claims during the period to expire at noon on July 1, 1932. Never before has an owner of any type of mining claim been required to notify the United States of his claim before filing application for patent. But it is deemed fair to the claimants of oil-shale lands and to the best interests of the Government that all claimants come forward within a reasonable time and state whether they will assert their claim. All who decide in the affirmative shall then either file an application for patent by July 1, 1932, or file an affidavit that they have performed the annual labors for the period expiring July 1, 1932. . . . This bill provided a procedure which will work automatically as to all those persons who have already rested upon their right for 10 years; will give them a little over a year to determine whether they desire to perfect their title, and two years more to complete their patent work and apply for patent. All who fail and refuse to do so will automatically forfeit the rights theretofore initiated, after lapse of 12 to 14 years.

It must also be recognized that among those who have net yet applied for patent and a certain number of claim-

ants who have maintained their claims under the laws of the United States and the well-known rules and customs of mining communities which do not require a claimant to apply for patent at any time unless he desires so to do. That is the present law.

STATUS OF CLAIMS NOW AND HEREAFTER INCLUDED IN APPLICATION FOR PATENT

A number of applications for patent are still pending and undisposed of. It is considered by aplicants that annual labor is not required upon such claims. It is possible that for some technical reason, not affecting the validity of the claim as a mining claim, patent may be denied at a time and under circumstances which would put such claims under default of anual labor under the terms of this bill. Therefore, as to all such claims, and any others upon which patent may be applied for before July 1, 1932, it is provided that annual labor shall not be required upon any claim included in an application for patent. . . .

The following is the letter of the Secretary of the Interior, of February 6, 1931:

DEPARTMENT OF THE INTERIOR,
Washington, February 6, 1931.

Hon W. R. EATON,
House of Representatives.

MY DEAR MR. EATON: Referring to your informal request, the following is the latest approximate information relative to oil-shale lands:

1. The areas classified by the Geological Survey as oil-shale lands that are shown on maps approved by the May 29, 1930, as being subject to the provisions of Executive Order No. 5327 of April 15, 1930, withdrawing public oil-shale deposits and lands containing same for classification, are: Colorado, 1,496,000 acres; Utah, 2,754,000 acres; Wyoming, 4,006,000 acres; a total of about 8,256,000 acres.

2. The areas patented to date under oil-shale placers are: Colorado, 112,000 acres; Utah, 69,000 acres; Wyoming 3,400 acres; a total of about 184,000 acres.

3. The areas included in oil-shale claims pending for patent are: Colorado, 68,000 acres; Utah, 14,000 acres; Wyoming, 2,800 acres; a total of about 85,000.

Very truly yours,

RAY LYMAN WILBUR.

Exhibit C-409. February 12, 1931, "Memorandum for the Press (pp. 1, 6) by Secretary of the Interior Wilbur, and attached copy of October 24, 1930, Letter (pp. 7-8) to Secretary Wilbur from Attorney General Mitchell:

Secretary Wilbur today made the following statement to the Senate Committee on Public Lands investigating the Kelley oil shale charges:

No formal notice has been given me as to the purpose of this hearing but I take it for granted that you want my statement on the oil shale charges made by Ralph S. Kelley in the New York World for which, I understand, he received $12,000. As this Department's disposition of oil shale lands is entirely a matter of record, I have had brought here the complete record in each of the 51 cases in which title has issued under my administration. I will be pleased to have you make a minute examination of these records. I have also had segregated the 73 cases which were patented before I took office but after passage of the Leasing Act. It is hoped that you will also make an exhaustive study of these cases. In addition, there are now pending before the Department applications for patent in 63 cases. The records in these cases also are available for your inspection. As these are all original records I ask that they be carefully preserved.

Inasmuch as on November 6 I transmitted to this committee a request for legislation clarifying the oil shale laws, upon which request as yet no action has been taken, and at that time invited a complete legislative review of the whole question, you can rest assured that no one in

the Interior Department is going to object to an investigation of the oil shale situation by any impartial body. We will gladly make all of our records and our officials available for examination by this committee, as was done for the Department of Justice. That Department, on October 24, made an exhaustive study and report. I should like to have included in your record the final report of the Attorney General of the United States.

I wish to assure you that, despite Mr. Kelley's nonsense, the oil and gas reserves of this nation will continue to be conserved by this department, as long as I am Secretary of it, but with regard for all equities and with respect for statutory requirements. Any oil shale claimant who complies with the law can expect his claim to go to patent, uninfluenced by any hysteria arising from Mr. Kelley's statements. The speculator who is imposing on the public domain will continue to go through the house cleaning process instituted by the posting of over 6,400 claims at my direction. . . .

Attorney General Mitchell, after his Department had investigated the Kelley charges, wrote to Secretary Wilbur on October 24, 1930, as follows:

My dear Mr. Secretary:

I am transmitting herewith a copy of the report of Assistant Attorney General Richardson upon the charges made by one Ralph S. Kelley, regarding the administration of oil shale lands in your department.

The Assistant Attorney General has made a thorough and painstaking inquiry. His conclusions are that there is no merit or substance in Kelley's charges against the Interior Department. With his conclusions I fully agree.

The points in his report that stand out in my mind are as follows:

1. Kelley has made an effort to give the public the impression that oil shale lands presently worth untold billions have been or are about to be lost to the Government. In his charges he uses much expressions as "oil shale worth forty billions" and "surrender of bil-

lions of dollars of oil lands." The facts are that oil shale has no substantial present commercial value; that the cost of mining the shale and extracting the oil greatly exceeds the value of the product; that many experts think oil may be more cheaply obtained from coal; and whether it will be found advantageous to extract oil from shale after our present sources of supply are exhausted or at any time is purely speculative. While oil shale may have a potential value and everyone will agree that the Government's interest in these lands should be carefully guarded, the somewhat wild and reckless statements made in Kelley's charges respecting values reflect on the accuracy of his statements.

The Geological Survey estimates a total of 8,257,791 acres of oil shale land in Wyoming, Utah, and Colorado, where the big shale deposits are found. Of that amount, only 175,724 acres have been patented during this and all previous administrations. During the present administration only 42,840 acres have been patented, and of that amount the patent of 23,057 acres was approved by Kelley himself. Patents on 15,778 acres were required to be issued as a result of the Krushnic decision by the Supreme Court, leaving only 7,278 acres patented, the patent of which Kelley either disapproved in whole or in part or said nothing about. The United States still owns 97 per cent of all its original oil shale lands.

2. One of Kelley's chief complaints is directed at the decision of the Interior Department rendered by Assistant Secretary Finney and former Secretary Work as to what constitutes discovery of oil shale by a claimant under the mining law. The department hold that the discovery of the upper layer of oil shale constituted discovery, since it is a geological fact that the presence of this upper layer in the so-called Green River formation shows with certainty the presence of the lower richer strata of shale, Kelley claims that to make a discovery the lower strata, though known to exist, must be opened up or penetrated. There is obviously no basis for charging misconduct in making such a decision. The decision

seems eminently reasonable, but at most it was merely a matter of judgment on a debatable point. Other specific complaints of Kelley's are of this type. . . .

In looking through this report and the attached documents, I should say that there is more evidence to support the conclusion that you and your department have been exceedingly strict and exacting in resisting claims for patents than that you have been too liberal.

Exhibit G-729. Hearing on Senate Resolution 379 before the Senate Committee on Public Lands and Surveys, 71st Cong., 3rd Session (January and February, 1931) (pp. 1, 2, 34, 51, 52, 62-63, 83, 98, 175, 211):

The committee met, pursuant to call, at 10 o'clock a.m., in room 326, Senate Office Building, Senate Key Pittman, of Nevada, presiding.

Present: Senators Pittman (acting chairman), Glenn, Kendrick, Walsh of Montana, and Bratton.

Present also: Hon. Ray Lyman Wilbur, Secretary of the Interior; Hon. Edward C. Finney, Solicitor, Department of the Interior; Northcutt Ely, executive assistant to the Secretary of the Interior; U. E. Goerner, Esq., assistant law examiner, General Land Office.

Senator WALSH of Montana. Gentlemen, in the absence of the chairman of the committee, I will suggest that Senator Pittman be requested to act as chairman.

Senator PITTMAN. Very well.

The resolution upon which the committee will conduct its hearings will be inserted in the record at this point.

(Senate Resolution 379 reads as follows:)

> Whereas it has been recently charged in the public press upon the authority of a former employee of the Government, of reputed good character, long in the service of and charged with the duty of inquiring into the circumstances attending the disposition of the public lands, that considerable areas of such, valuable potentially and otherwise because of

the oil shales in which they abound, have been improvidently, erroneously, and unlawfully, if not corruptly, transferred to individuals and private corporations, to the great loss of the public: Therefore be it

Resolved, That the Committee on Public Lands and Surveys, or any subcommittee thereof, be, and hereby is, authorized and directed to inquire into the charges so made and into the alienation of oil-shale lands of the United States, so far as they have been alienated, and to the practices, rulings, and action of the Department of the Interior in relation to the preservation of disposition of such lands, or of applications for patent to the same, and to make such recommendations as to it may seem appropriate touching needed legislation or other governmental action for the recovery of any such lands as may have been wrongfully alienated, or for a review of any final award by the Secretary of the Interior or any such lands.

The said committee or subcommittee is hereby authorized to sit, act, and perform its duties at such times and places as it deems necessary or proper; to require by subpoena or otherwise the attendance of witnesses; to require the production of books, papers, documents, and other evidence; and to employ counsel, experts, and other assistants. The cost of stenographic service to report such hearings shall not exceed 25 cents per hundred words. The chairmen of the committee or subcommittee, or any member thereof, may sign subpoenas and administer oaths to witnesses; and every person duly summoned before said committee or subcommittee, who refuses or fails to obey the process of said committee or subcommittee, or appears and refuses to answer questions pertinent to the investigation shall be punished as prescribed by law. . . .

Senator WALSH of Montana. I dare say Mr. Finney is more familiar with these matters than the secretary, and I suggest that we begin with him. It will be borne in mind that the resolution was simply referred to this committee for a recommendation as to whether or not the Senate ought to adopt it, and I think we ought to try to get a

general idea of what the charges are, and the foundation for them, as a basis for our further action.

Senator PITTMAN. I was going to suggest, Senator, that you have paid more attention to this than the other members of the committee, and I suggest that we proceed in any manner that you consider advisable.

Senator WALSH of Montana. Let me say to the committee that I have gone over the Kelley letters; the opinion of Mr. Richardson with reference to the charge therein made; the letters of Mr. Finney and of the Secretary in relation to them, and the proceedings before Secretary Work in connection with the reopening of the so-called Freeman-Summers case, made the subject of some considerable comment by Mr. Kelley in his letters.

For the information of the members of the committee, I feel that this preliminary statement ought to be made.

The charges center very largely about this so-called Freeman-Summers case. . . .

Senator WALSH of Montana. I think that is quite appropriate.

We will adjourn until 10 o'clock on Tuesday, February 3, 1931.

Secretary WILBUR. I brought along all the records of the cases under dispute. Will you take care of them for us or do you desire us to take them back with us? You are taking up a very large contract in this proposition. We propose to see this through to the very last case.

Senator WALSH of Montana. I had not thought, Mr. Secretary, of going into it at this time to that extent, but of course the committee will be glad to have anything you care to submit.

Secretary WILBUR. Certain charges have been filed, although no formal ones have been presented. They have been of a certain character and now that the Senate has started in on this we feel that we should have clearance in the Senate.

Senator WALSH of Montana. Absolutely. . . .

Mr. FINNEY. December 1, 1926. That was a general hearing and not limited to this case.

I may say that after the record was received in the department the attorneys for Freeman, Consaul & Helt-

man, asked to be heard orally before me, and by my letter of September 29, 1926, I authorized an oral argument. Subsequently I found Summers was not represented at that time by any Washington lawyer, so on October 14, 1926, I revoked the order for oral argument on the ground that the attorney for Summers could not attend any oral argument that might be had before the department, and advised them the case would be considered on the evidence and briefs filed.

Senator WALSH of Montana. So there was no oral argument?

Mr. FINNEY. Not in that specific case; no, sir.

Senator WALSH of Montana. But intervening, this general conference was had?

Mr. FINNEY. Yes.

Senator WALSH of Montana. I have here a memorandum showing who was present at the conference. I will put it in the record at this time. It is before the Secretary of the Interior on December 1, 1926, on the question of what constitutes a sufficient discovery to support the claim of an oil shale placer locator under the general mining law.

Let me inquire: How did this discussion come to take place, Mr. Finney?

Mr. FINNEY. That is a question that I can not answer definitely. It is my recollection that a number of people in Colorado, in the West, and possibly some members of Congress, asked the Secretary to have a general hearing on this subject.

Senator WALSH of Montana. On what subject?

Mr. FINNEY. On the subject of what constituted a sufficient discovery of a shale mining claim.

Senator WALSH of Montana. Have you any record showing by whom the conference was had?

Mr. FINNEY. I have not been able to find any. I have looked and found none. We found the departmental press notice authorizing the hearing.

Senator WALSH of Montana. Can you put that in the record?

Mr. FINNEY. Yes; that does not say on whose request.

Senator WALSH of Montana. Will you read the notice?

Mr. FINNEY (reading):

DEPARTMENT OF THE INTERIOR

MEMORANDUM FOR THE PRESS

(Immediate release)

OCTOBER 22, 1926.

The act of February 25, 1920, commonly known as the general leasing law, provided that thereafter oil shale and certain other mineral deposits should be subject to disposition only in the form and manner provided by said general lease act, "except as to valid claims existent at the date of the passage of this act, and thereafter maintained in compliance with the laws under which initiated, which claims may be perfected under such laws, including discovery."

The records of the Department of the Interior show that prior to the enactment of the general leasing law numerous locations under the placer mining laws had been made upon alleged oil-shale deposits, particularly in the States of Colorado, Utah, and Wyoming. Some applications for patent are pending before the department, and numerous other oil-shale claims are under investigation in the field.

These cases involve not only a determination of the facts pertinent to each case but determination under the law as to what constitutes a sufficient discovery to support the claim of an oil shale placer locator who is seeking or intends to seek patent under the general mining law.

In view of expressions of interest or requests to be heard by various persons on this subject, the Secretary of the Interior has announced that on December 1, 1926, at 10 a. m., he will hold in his office a public hearing upon this subject. At that time and place any person interested and desiring to submit his oral or written expression of views, statements of fact, or discussion of applicable law, will be heard.

Senator WALSH of Montana. How extensively was that notice published?

Mr. FINNEY. I can not answer that. I know it was published in some of the western papers, Colorado pa-

pers and others. It was open to all the press, in the information room, for distribution.

Senator WALSH of Montana. Do you know whether any of the Washington papers carried it?

Mr. FINNEY. I can not recall.

Senator WALSH of Montana. Were there any special invitations sent out to anybody?

Mr. FINNEY. I think none. I found no record.

Senator WALSH of Montana. You have no recollection?

Mr. FINNEY. No. . . .

(The hearings of December 1, 1926, before the Secretary of the Interior, are as follows:)

HEARINGS, DECEMBER 1, 1926, BEFORE THE SECRETARY OF THE INTERIOR ON THE QUESTION OF WHAT CONSTITUTES A SUFFICIENT DISCOVERY TO SUPPORT THE CLAIM OF AN OIL SHALE LOCATOR UNDER THE GENERAL MINING LAWS

DEPARTMENT OF THE INTERIOR
OFFICE OF THE SECRETARY.

Present: Hon. Herbert Work, Secretary of the Interior; Hon. E. C. Finney, First Assistant Secretary of the Interior; Hon. William Spry, Commissioner of the General Land Office; Dr. George Otis Smith, Director, U. S. Geological Survey; Dr. Edward Mead, Commissioner of Reclamation; Mr. Robert D. Hawley, Denver, Colo.; Hon. William L. Boatright, attorney general of Colorado; Mr. E. D. Winchester, consulting geologist, Denver, Colo.; Mr. Fred Carroll, Denver, Colo.; Mr. Charles A. Mitke, consulting mining engineer, Phoenix, Ariz.; Mr. Samuel J. McMullin, Grand Junction, Colo.; Mr. William G. Russell, Denver, Colo.; Mr. L. H. Larwill, Denver, Colo.; Mr. Harold D. Roberts, Denver, Colo.; Hon. John B. Kendrick, United States Senate; Hon. Edward T. Taylor, House of Representatives; Hon. Charles E. Winter, House of Representatives; Mr. George K. Thomas, First National Bank Building, Denver, Colo.; Mr. C. W. Church, Index Shale Oil Company, De Beque, Colo.; Mr. George E. Brimmer, The Prairie Oil & Gas Co., Cheyenne, Wyo.;

Mr. Charles F. Consaul, Mills Building, Washington, D. C.; Mr. Daniel J. Danker, Brookline, Mass.; Mr. Lewis Z. Harrison, 160 Broadway, New York City; Mr. A. C. Harvey, The Pure Oil Co.; Mr. Samuel Leon Levy; Mr. J. D. Northrop, Geological Survey; Mr. L. G. Owen, Mr. Edward F. Johnson, and Mr. Peter Q. Nyce, representing L. P. Lyons; Mr. David A. Shepherd, secretary, The Columbia Oil Shale and Refining Co.; Mr. C. D. Sinclair, American Shale Reducing Co., 115 Broadway, New York City; Mr. H. I. Smith, Geological Survey; Dr. Joseph P. Umpleby, geologist; Mr. F. D. Weaver, Camden, N. J.

DECEMBER 1, 1926—10 a. m.

Secretary WORK. It is unnecessary, of course, for me to state the purpose of this hearing. It has definite and exclusive reference to oil shale—particularly to the laws and the regulations that have been established under them by the General Land Office—and with reference to the General Land Office's responsibility in administering oil-shale lands. This is a "hearing" as far as the Department of the Interior is concerned. We have to make the regulations under the laws, and we have to administer this rather new mining industry. . . .

It may be stated generally that the term "discovery," as applied to a mining claim, means acquirement of knowledge that it is reasonably valuable for placer mining. It is not necessary that shale in paying quantities be found. On that question the courts of Alaska, California, Colorado, Idaho, Montana, Nevada, Oregon, and the circuit court of appeals and other Federal courts have ruled specifically. It is sufficient if shale is found under such circumstances and of such a character and quantity that a reasonably prudent man would be justified in expending time and money in developing it with the reasonable expectation of finding thereon shale in paying quantities.

Now, why is it, we ask, that there seems to be a disposition to apply a fixed rule relative to discovery and perhaps other questions when it has never been done

before and it has never been recognized in regard to any other deposit? Here we have decisions covering metalliferous deposits and we have decisions covering fossiliferous deposits, and here we have a sedimentary deposit, and it was you, yourself, Mr. Smith, in 1916, that called the attention of the department to the fact that this deposit would be difficult to be brought within the provisions of the placer laws; and yet, Mr. Secretary, it was done. In 1916, after the Geological Survey published three different pamphlets calling the attention of the people of western Colorado to this great resource, the land was classified and the General Land Office declared that the land might be entered under the placer act. We came down here in 1918. The question of the disposition of this land in that area was then at issue. We went before the Sixty-sixth Congress, which formulated the leasing bill, and the Sixty-sixth Congress in that leasing bill put in a saving clause protecting the rights of these locators—and why? I have no doubt but what there is some disposition on the part of some people, perhaps overzealous, to talk about us as western speculators; and yet, gentlemen of the department, I want to say to you that we made our shale locations in 1916, 1917, 1918, and 1919 primarily because we understood it was a war resource and that it was a patriotic duty, and the Sixty-sixth Congress understood that and they protected those of us who had acted from that sense of duty. . . .

Secretary WORK. In what connection, if any, was a 15-gallon minimum prescribed as necessary to a permit?

Mr. LARWILL. Only in the letter just mentioned there.

Secretary FINNEY. He quoted the original decision in the Freeman case.

Secretary WORK. Simply it becomes a question with respect to what is the approximate minimum amount of oil necessary in the shale—necessary to prove discovery —is that it?

Mr. LARWILL. Mr. Secretary I do not believe—

Secretary WORK. Isn't that the question? I am not a lawyer.

Mr. LARWILL. No; our belief, if you please, sir, is that under the laws as they exist no minimum requirement should be made as to the amount of oil discovered; if oil shale bearing material is discovered, on each of the claims and then the surrounding evidence shows—

Secretary WORK. The oil shale would carry a little oil?

Mr. LARWILL. Yes; it must carry some oil.

Secretary WORK. You want it to show oil—definite proof of the existence of oil on the surface—you want that to show discovery?

Mr. LARWILL. On the surface, or dig down under the detritus far enough to get into the shale?

Secretary WORK. Either one; but particularly on the surface because that is where you can see without any lens.

Mr. LARWILL. And when you are in the shale you are in the Green River series and it does not make any difference at what page you have opened that series in the book, you have opened it up, you have made a discovery. Yes, sir, that is our case.

Secretary WORK. You just want to prove the existence of the field of oil regardless of its quantity?

Mr. LARWILL. Yes; prove the existence of oil regardless of quantity, but it goes to prove the character of the country.

Secretary WORK. You are getting into geological inference. Would not it be a little better to show oil and there would not be so much inferential?

Mr. LARWILL. You must show oil Mr. Secretary on every claim. Oh, yes; you must show the oil on every claim.

Secretary WORK. Well, that gets back to the first proposition; you simply want the department to be satisfied that you have discovered oil-bearing shale, and that is discovery?

Mr. LARWILL. In this area?

Secretary WORK. Well, anywhere. Why in that area?

Mr. LARWILL. In this area because it is a known mineralized area of oil shale, and that is all that we are concerned with.

Secretary WORK. If it is discovered anywhere I think it would be oil-bearing shale just the same.

Mr. LARWILL. If you have discovered the mineral that you are after—

Secretary WORK. You object to the specified minimum?

Mr. LARWILL. Any minimum—any limitation. The law does not; the cases do not.

Mr. HAWLEY. It might be well Mr. Secretary to give to you a suggestion which has occurred to us in our consideration of some of these things as to what in general a rule might be.

Secretary WORK. We will be glad to hear it.

Mr. HAWLEY. A legally sufficient discovery to form the basis of a location of an oil-shale placer claim appears when it is shown that oil-yielding shale is physically exposed upon the claim, and the evidence is of such a character that a person of ordinary prudence would be justified in further expenditure of his labor and means with a reasonable prospect of success in developing a valuable mine. Evidence may be to the effect or of such a character as to show that the shale so exposed is a part or portion of a formation or deposit which is known through geological evidence, exploration, or development at other points to carry oil shale of value.

Secretary WORK. I say that is a good statement. You require a little more discovery than I indicated a moment ago. [Laughter] . . .

Here was my theory: On the surface, according to the testimony, and that includes the testimony of one of the Government engineers, there had been discoveries of shale, exposures or workings. Now, probably that bed of shale in and of itself would not have paid to work. In fact, none of them would pay to work at the present time, but, the miner who takes the piece of land is entitled to consider not only the top but what is below and the presence of these richer beds in the land may properly be coupled with what is on the top and will justify a man

going down through this formation with the prospect of developing a mine.

That is the theory of the decision, Senator, right or wrong.

Senator WALSH of Montana. I can understand that perfectly well and I can understand likewise the theory that there being a little strata on the surface, but the richer strata being exposed in cuts and canyons elsewhere, I can very well understand that contention, the discovery being made of the little strata on the top, although there are intervening barren strata, that the contention may very justifiably be made, that having discovered a little strata at the top, he may take into consideration what he learns from the exposures even miles away, of the existence of the rich strata below. That I can understand perfectly well. I take it you had that in mind in writing your opinion.

Mr. FINNEY. Yes, sir.

. . . .

Secretary WILBUR. No formal notice has been given me, Mr. Chairman, as to the purpose of this hearing, but I take it for granted that your whole inquiry here is with regard to oil-shale charges made by Ralph S. Kelley in the New York World, for which I understand he received $12,000. As this department's disposition of oil-shale lands is entirely a matter of record, I have had brought here the complete record in each of the 51 cases in which title has issued under my administration. I will be pleased to have you make a minute examination of these records. I have also had segregated the 73 cases which were patented before I took office but after passage of the leasing act. It is hoped that you will also make an exhaustive study of these cases. In addition, there are now pending before the department applications for patent in 63 cases. The records in these cases also are available for your inspection. As there are all original records I ask that they be carefully preserved.

I might state that we had some 15 members of the Land Office working 12 hours a day for nearly five weeks

making this information available, so that was an exhaustive study.

Inasmuch as on November 6 I transmitted to this committee a request for legislation classifying the oil-shale laws, upon which requests as yet no action has been taken, and at that time invited a complete legislative review of the whole question, you can rest assured that no one in the Interior Department is going to object to an investigation of the oil-shale situation by an impartial body. We will gladly make all of our records and our officials available for examination by this committee, as was done for the Department of Justice. That department, on October 24, made an exhaustive study and report. I should like to have included in your record the final report of the Attorney General of the United States.

Exhibit C-149. May 26, 1931, Letter of Instructions to J. Arthur Moore, Chief of Field Division, General Land Office, Denver, Colorado, from Acting Commissioner Harell and Secretary of the Interior Wilbur (pp. 1-3):

It was not the intent of the Freeman-Summers decision to indicate any specific geographic area other than the particular area in controversy within which the findings should govern. . . . The Department based its decision on the fundamental requirements of the mining laws, and any case coming within the broad principles laid down in that decision . . . should be adjudicated in accordance with those principles. . . . Where . . . the Chief of Field Division is satisfied from reports of his engineers or from other official geologic data that the claims which are subject to report are in part of the Green River formation which carries oil shale in valuable quantities and quality, the fact should be conceded, thus narrowing any issue, if any, as to discovery to the inquiry whether shale that would yield oil on destructive distillation was exposed on the location or whether claimants were diligently engaged in the search for oil shale at the date of the leasing act or at the time of an appropriation of the land under any other public land law to which it was subject.

Exhibit C-352. Annual Report of the Secretary of the Interior for the Fiscal Year Ending June 30, 1931 (pp. 29-32):

OIL SHALE

Since the last annual report the circumstances surrounding the Kelley oil-shale charges have been brought to light by the Senate Committee on Public Lands. It will be recalled that on September 28, 1930, Ralph S. Kelley, a land office employee, former chief of field division at Denver, published a letter of resignation, accusing the department of collusion with Colorado oil-shale locators in disposing of lands worth many billions of dollars. Subsequently a series of 14 syndicated articles appeared in the New York World amplifying these charges. Kelley had been called to Washington on July 7 to take charge of oil-shale matters in the Washington office, following his protracted but indefinite criticism of handling of cases here, and had failed to report for duty until August 5. Correspondence between Kelley and the World, brought to light by the Senate committee, showed that Kelley, from July 29 to the date of his resignation, September 28, had been arranging for sale of his material to the World. He signed a contract on September 11 under which he was to receive $12,000 if he remained in Government service and completed his articles before resigning, or $6,000 if he was caught and discharged....

Later the Senate Committee on Public Lands developed the facts stated above about his employment. He was paid his $12,000, or about 50 cents per word. The venture was not a financial success, however. The World's correspondence with its agents and the 200 or more papers to whom it tried to sell the story makes entertaining reading but has no place here. However, in view of the publicity given the Kelley matter, the statement by the World published on December 25, 1930, in reply to the following letter, was gratifying.

[Statement by the World]

"From Secretary Wilbur:

"Between October 6 and 10, 1930, inclusive, the World published a series of articles over the signature of Ralph S. Kelley, a former chief of the field division of the United States land office at Denver, Colo. These articles not only criticized my administration as Secretary of the Interior but impugned my official and personal conduct.

"I do not question the absolute right of the World or any other newspaper to comment fairly upon the acts or policies of the Department of the Interior or of myself as its responsible head, nor the right to obtain, if possible, an investigation of the decisions, policies, or the personnel of the department. For my part I welcome such an investigation.

"I do deny your right, however, to publish such statements as were made by Mr. Kelley which reflect upon my personal integrity and which were untrue in fact. . . .

"The World has already stated, and it is very glad to state again, that in publishing Mr. Kelley's articles it did not indorse or guarantee the validity of his criticisms. It merely affirmed its conviction after careful investigation of Mr. Kelley's record that his charges were made in good faith and with technical competence. The only purpose which the World has sought to attain by the publication of Mr. Kelley's articles was to insure a full inquiry by the Senate into the questions which Mr. Kelley raised, and it has complete confidence that if the Senate authorizes the Public Lands Committee to conduct this investigation the truth will be fairly ascertained. The World is happy to note that Doctor Wilbur himself welcomes such an investigation, for his cooperation in this matter will contribute greatly toward public confidence in it. As to the question of Secretary Wilbur's personal integrity which he raises in this letter, the World can only say it has never believed or implied that in all these complicated transactions he did any dishonorable thing."—EDITOR THE WORLD. . . .

The oil-shale problem arises from the provision of section 37 of the mineral leasing act which permits claims located prior to the date of the act (February 25, 1920) to proceed to patent in compliance with the mining laws as they existed on that date. The principal requirements are good faith of the locator, performance of assessment work, and discovery. Some months prior to Kelley's resignation a Supreme Court decision in the case of Wilbur v. Krushnic had held that a locator in default in assessment work could resume work at any time in the absence of a challenge by the United States. Thereafter, convinced that many claims were being held without compliance with the law's requirement of assessment work, the department in January, 1930, had undertaken the task of physically posting notices of forfeiture on each claim as a preliminary step to adjudication. This work had been under way many months to the time of the Kelley matter. To date about 7,500 such claims have been posted; about 5,500 remain. Where the law as to discovery, assessment work, and good faith of locators has been complied with, patents issue on completion of $500 of development work and application for patent. About 195,000 acres have been patented in all. The estimated oil-shale area in Colorado is about 1,496,027 acres, in Utah, 2,754,959, and in Wyoming, 4,006,805; 156,024 acres are included in two naval reserves.

Currently we have under way the immense task of adjudicating the status of all outstanding claims which the Kelley fiasco temporarily interrupted. We have requested the Senate Committee on Public Lands to continue to a thorough conclusion its examination of the oil-shale matter, particularly if it can lead to legislation clarifying the questions left uncertain by the leasing act.

The House Committee on the Public Lands has reported out a bill (H. R. 15002) designed to fix a dead line by which all claims must proceed to patent or be abandoned and relaxing the department's conservation policy by excusing certain defaults in assessment work. A full summary of the oil-shale problem and the department's requests for legislative clarification will be found

in the report on this bill. (Report 2537, House; 71st Cong. 3d sess.)

Exhibit C-157. September 18, 1931, Letter to Commissioner, General Land Office, from Assistant Secretary of the Interior (p. 6):

With respect to your finding that the Annex No. 6 is void for lack of discovery, the Department believes the conclusion fully warranted. There is nothing said in the case of *Freeman* v. *Summers* that dispenses with the legal necessity of an actual discovery within the bounds of the location. *Alturas Shale Company* (decided July 9, 1930, unreported).

Exhibit C-699. August 4, 1933, Memorandum signed by Commissioner, General Land Office, and Assistant Secretary of the Interior (p. 1):

MEMORANDUM FOR THE
ASSISTANT SECRETARY

The attached letter is submitted for your approval, following the procedure established through verbal instructions to this office by Mr. Northcutt Ely, Executive Assistant to Secretary Wilbur, sometime in March of 1931, that letters to Registers, notifying them of approval of oil shale mineral entries for patenting, be submitted for approval of the Secretary, accompanied by the records and memoranda stating in chronological order the various actions taken in each case.

Mr. Ely had charge of oil shale matters in the Department and this action was deemed advisable at the time because of the flareup in regard to oil shale matters caused by the charges made by former Chief of Field Division Ralph S. Kelley in articles published in the "New York World," and by the hearing thereon before a subcommittee of the Senate Committee on Public Lands and Surveys, of which the late Senator Walsh was a

member. The matter was dropped by the committee at the close of the hearing, no recommendation being made.

Under date of April 18, 1931, Senator Gerald P. Nye, Chairman of the Committee on Public Lands and Surveys, advised the Secretary of the Interior relative to his inquiry of April 10, 1931, as follows:

> "Responding now to your letter of April 10, I have conferred with Senator Walsh and beg to advise that there is no reason why your Department should not proceed to final disposition of the pending application for patents to oil shale lands in conformity with the law."

There are only 14 oil shale applications for patents and 14 entries pending at this time and I am of the opinion that these cases and any new oil shale cases should be adjudicated as other mineral entries are adjudicated without referring them to the Department, and will be so handled hereafter if you agree with my views in this regard and approve this memorandum.

Approved: Aug. 10, 1933

/s/ [Illegible]
Commissioner.

/s/ [Illegible]
Assistant Secretary.

Exhibit C-418. June 10, 1936, General Land Office Memorandum to Mr. Moyer from Mr. Carpenter (p. 1):

The attached letter from Mr. Leech suggests the following procedure relative to the oil shale placer locations in western Colorado and eastern Utah. . . .

It seems clear that these claims, like other mining locations on the public domain, are subject to adverse proceedings for failure to comply with the law. The court in the case of Ickes vs. Virginia-Colorado Development Company (295 U.S. 639) confirmed the long estab-listed rule that the Secretary of the Interior has author-

ity to determine that a mining claim is invalid for lack of discovery, fraud, or other defect, or that it is subject to cancellation for abandonment. Proceedings have been brought by the Land Department in many cases in the past based on charges of invalidity in any or all of the above particulars, and, where the facts adduced supported the charges brought, the locations have been declared null and void.

Exhibit C-776. January 20, 1939, Letter from D. D. Potter, Esquire, Rocky Ford, Colorado, to Senator Ed C. Johnson (pp. 1-4):

A short time ago I learned that you introduced a bill, S. 4138, at the last session of Congress; that this bill was not enacted at that session, but would probably be re-introduced at the present session. Those interested in the oil shales would be very much opposed to the passage of this bill.

Beginning with 1916, and for several years thereafter, a large number of placer mining claims were located on the oil shale lands of Colorado, Utah and Wyoming, at the instance of and through the promotion of the United States government. At that time it was believed by the best geological authorities that the known oil reserves in the United States would be exhausted by 1935. The U. S. Geological Survey believed that the oil shales would provide a supplemental supply of motor spirits and other oil products. Oil had been produced from shale commercially in Scotland and France for more than seventy-five years.

The work on the shales was really initiated by the U.S. Geological Survey as early as 1913, when M. C. Woodruff and David T. Day of the Survey began an examination of the Green River Formation in Colorado and Utah, and made rough field tests to determine the richness of the shales. I would respectfully refer you to Bulletin 641-F of the U.S.G.S., entitled "Oil Shale in Western Colorado and Adjacent Areas", by Dean E. Winchester. This bulletin was published December 18,

1916, and no doubt is still available. Woodruff and Day had before that time published a less complete report.

The Winchester bulletin was given wide circulation, and David T. Day and others from the Geological Survey visited the larger cities in the mining states and vigorously promoted interest in shale. R. D. George, our state geologist, and Victor C. Alderson, president of our School of Mines, were asked to co-operate with the Government in creating public interest in the shales. Both of them became very active, lectured and wrote at length about the oil shales, and undertook experimental work, which was fostered by the Bureau of Mines. Later, the Bureau of Mines established an experimental plant at Rulison, Colorado, and for several years mined and retorted the shales, producing considerable oil and securing much valuable information.

In 1918, an agitation was stated for the enactment of an oil leasing bill. The owners of oil shale placer mining claims, being uncertain how their rights might be affected, asked for a hearing before the Secretary of the Interior, and such hearings was granted at which Assistant-Secretary Vogelsang presided. I believe this was about February 20, 1918.

There were present at this hearing, from the Department: M. F. Finney, Solicitor; George Otis Smith, Director of the U.S. Geological Survey; Van H. Manning, Director of the Bureau of Mines, and Clay Tallman, Commissioner of the General Land Office. There were also present a number of Senators and Representatives from Colorado, Utah and Wyoming.

After this hearing we were assured by the Secretary and the other gentlemen representing the Government that, while they favored the enactment of a leasing law, they would co-operate with us in having our oil shale placer mining claims excepted from the operation of that law. Solicitor Finney, Senator Charles S. Thomas of Colorado, Mr. John H. Fry and myself conferred together and drafted a clause excepting the oil shale placer claims from the operation of the leasing law. With slight modi-

fications, our proposed clause became section 37 of the Oil Leasing Bill, which was enacted February 25, 1929.

* * * *

There has been performed on practically all of these unpatented shale claims, which were valid and existent at the time of the passage of the Oil Leasing Law, from $500 to $1000 worth of work and improvement on each claim. There has been expended upon unpatented oil shale claims owned by myself and associates not less than $500,000. It is our belief that we will be able, when conditions in the oil business and in business generally further improve, to patent these lands and operate them with the hope of recovering our investment. . . .

The oil shale claimants want only the opportunity of patenting their claims under the law under which they were initiated, to the end that they may go forward with the development of this industry. . . .

Exhibit C-776. March 24, 1939, Letter to D. D. Potter from Senator Ed C. Johnson (p. 1):

Thank you for your exhaustive letters and explanation of your position in regard to S. 4138 which I introduced at the last Session of Congress.

You will be pleased to know that I have not reintroduced this measure and that the whole matter is now closed. I will not have anything further to do with legislation withdrawing unpatented shale lands.

Exhibit C-777. June 16, 1939, Letter to Representative De Roven, Chairman, House Committee on Public Lands, from Secretary of the Interior Ickes (pp. 2, 3):

. . ., an examination was made by the General Land Office in the years between 1920 and 1930 to determine the status of the oil shale placer mining claims on and about the Green River shale formation in Colorado, Wyoming, and Utah. . . .

It should be emphasized that valid existing claims may be maintained, unaffected by the proposed bill, by com-

plying with the laws under which they were initiated. Further, the proposed legislation is not retroactive so as to enforce the forfeiture of claims by reason of defaults occurring prior to its effective date, but would have only prospective operation. . . .

In view of the considerations set out herein, I recommend that H.R. 6560 be enacted. . . .

Exhibit C-778. July 25, 1941, Letter to Senator Abe Murdock from Secretary of the Interior Ickes (p. 1):

I regret that the pressure of legislative matters has caused delay in replying to your letter of June 9 with reference to H.R. 6580 of the 76th Congress.

With your letter was enclosed a letter addressed to you from the Secretary of the Mountain States Development Company which urges that you give your support to H.R. 6580, a bill relating to placer mining claims. That bill was introduced at the request of the Department for the purpose of obtaining authority to clear up certain claims which have been pending since the passage of the Mineral Leasing Act. These claims were saved by section 37 of the act and because of a deficiency in the law it has not been possible to require that they be either developed or abandoned. The bill was passed by the House but because of amendments by the Senate Public Lands Committee which would have made the measure of questionable value it failed of enactment.

I have thought that the proposed investigation under Senator O'Mahoney's resolution, S. Res. 53, would provide a good opportunity to present this matter and to obtain a full consideration of its merits, and pending the commencement of the investigation I have not submitted the bill to the present Congress. . . .

Exhibit C-781. June 17, 1943, Letter to Senator Edwin Johnson from Secretary of the Interior Oscar Chapman (p. 1):

. . . upon recommendation of this Department, S. 1139 has been introduced in the United States Senate. This bill would require the oil shale claimants to record their claims in the General Land Office within a specified time, and to perform annually the assessment work contemplated by Section 2324, Revised Statutes, under penalty of forfeiture for failure to comply.

Exhibit C-1024. November 15 and 16, 1943, Hearings before a Subcommittee of the Senate Committee on Public Lands and Surveys, Pursuant to S. Res. 241, "*Administration and Use of Public Lands*" (pp. 3783-84, 3798-99, 3804-05):

STATEMENT OF D. D. POTTER,
ROCKY FORD, COLO.

Mr. POTTER. For the record, my name is D. D. Potter, attorney at law, and I practice generally over the State of Colorado.

The CHAIRMAN. What is your home address?

Mr. POTTER. Rocky Ford, Colo.

I wish to make a statement which I have written here, but I may interpose other matters, and I will give a copy of this written document to you when I am done.

I represent several small companies owning unpatented oil-shale lands in Garfield County, Colo. The names of these companies are: Standard Shale Products Co. of California; the Federal Shale Oil Co.; Crystal Shale Oil Corporation; the National Shale & Metals Co., all Colorado companies. I also represent the interests of my wife, Gertrude I. Potter, and myself.

I am particularly interested in S. 1139, Seventy-eighth Congress. Similar bills were introduced in the Seventy-fifth Congress and in the Seventy-sixth Congress. As I am informed, all of these bills were introduced at the request of the Department. The effect of S. 1139 would be to confiscate all unpatented claims for minerals covered by the Mineral Leasing Act of February 25, 1920.

. . .

The CHAIRMAN. I am sorry to have interrupted you so much, Mr. Potter, but this has been very interesting.

Senator MILLIKIN. Did this gentleman describe himself before he started testifying? He is one of the pioneers in the oil-shale business in this western country. He went in there when few were interested in the subject. He has spent literally hundreds of thousands of dollars in the development of oil shale, has worked in the experimental work. If you examine the reports in the Bureau of Mines you will find they have accepted logs of his on the richness of oil-shale beds. He is an outstanding man in the oil-shale business. He hasn't ever taken a free ride on anybody. Since he hasn't said that for himself, I want to say it for him.

The CHAIRMAN. We are very glad to have that.

Mr. POTTER. Shall I proceed?

The CHAIRMAN. All right.

Mr. POTTER. What I would like to call your particular attention to is the fact that from the very beginning of the oil-shale industry it was promoted by the Bureau of Mines and the United States Geological Survey; but the Department, they sent out men here into the field—sent out reports, they urged our people to get busy and locate and develop these claims.

Now, I have here before me—I am not going to read all of it—but if you please I would like to have the gentlemen look at this, glance at it, if they will, please. That is a report from David E. Day, and associates, sent out, I believe, in 1914 in which they made a report on the shales of the United States Geological Survey; and here is another one made out—the author was Denwin Chester, sent out in 1916. A man from the Department appeared in Denver, Los Angeles, Salt Lake City, and all over the western country, and asked us, for God's sake, to get behind the Government and help get some oil. They were short of oil in 1917 and in 1918, just as they are now, and it so happened that in 1918 there was a shortage. They also asked our university, our school of mines, or State geologists, and the president of our school of mines to promote this. The David E.

Day report appears here, and in these different places, people went in and located these claims and they believed, many of them at that time—in fact, the geological department mentioned these things could be done for $50,000—plants started, oil reduced, and so forth; but the Government promoted all of this stuff in 1916, 1917, and 1918, and urged people to get into this. That is when I first got into it, in 1916.

Now, after we got nicely started there came to be a question of whether or not the shale lands were subject to location under the placer law. I went to Washington, representing quite a number of shale men. Senator Millikin knows about them. About the 20th day of February 1918 I appeared with John H. Fry, one of our lawyers, and two engineers from the Pierce Engineering Co., of Chicago, with our State geologist. We had asked for a hearing, and we were heard before the Secretary of the Interior, or the First Assistant, Mr. Vogelsang. There were present the head of the Geological Survey, George Otis Smith, Van H. Manning, Director of the Bureau of Mines, and Clay Tallman, Commissioner of the General Land Office.

We had this hearing, we explained to them what the situation was, and we were assured that our locations would not be interfered with; that they would give us every cooperation, and were very anxious to have us go ahead and do what we could. There was a leasing bill pending. They favored the leasing bill. They figured 10 percent of this land would be taken up under private locations, private enterprise might go ahead, and they thought it was a good idea to have private enterprise to the extent of 10 percent, or thereabouts, as estimated. They assured us that we would have their full cooperation.

I stated at that hearing that if they would say that they would not cooperate, I would like to know it. I had only spent about $50,000 at that time, which I had gathered from my friends and neighbors, and if they were not going to cooperate, I would seek to repay the men. That is the proposition I made before Mr. Vogelsang's committee.

We went before the Public Lands Committee of the House. They asked us to present the information that we offered to them at that time. We had spent $25,000 on engineering information. We did go before the committee; there is a record of that. That was on the 26th day of February 1918, and that can be found in the public records. No doubt it will have a complete record of everything that everybody said. We went there at the special request of the Secretary of the Interior, and these other men, and of these outfits who were interested in mining and in the public land.

Now, right here, is a little reprint, and I would like to read the first statement which was made by Professor George, our State geologist:

> Mr. GEORGE. We appreciate the privilege you have given us of coming before you, but we would like to state that the hearing is not of our seeking. The facts we wish to present to you today were presented to the Department of the Interior some days ago, and they requested us to make the same presentation to your committee, and it is with that in view that we are before you today.

We went before them because we were asked to, and I call attention to the fact that the secretary or, rather the chairman of the Public Lands Committee of the House at that time was Scott Ferris. Probably none of you knew him; he had been a friend and neighbor of mine in Oklahoma, and we had to lend each other $5 now and then. I have loaned Scott that much money on several occasions, but I am not saying anything about what he loaned me. . . .

The CHAIRMAN. Do you, of your own knowledge, have any knowledge of difficulties thrown in the way of the small operators to get to patent?

Mr. POTTER. Not beyond what were thrown in the way of everybody else. All kinds of difficulties were thrown in the way of all shale claimants for years, until the panic of 1929 came along, and the oil price from 1931. Now, as a matter of act, I think this—I think that if the Department is ready to cooperate that we

have got to the point where we probably could go ahead, and as I say, the people whom I represent, and there are others just like them, are small people of ordinary means, and they have not been able to go ahead and patent and develop.

The CHAIRMAN. They have not been able to do the essential things toward a patent; is that what you mean to convey?

Mr. POTTER. I mean they haven't been able to go ahead and have this engineering work done, and legal work done; dig up the $2.50 an acre which is required for placer-mining land, which would cost five, six, or seven dollars an acre, at least, to do that. They haven't been able to do that. As a matter of fact, on account of this great litigation nobody has been willing to sit in and help finance these things until, perhaps very recently.

Now, I think, gentlemen, that that covers it.

The CHAIRMAN. I think you have covered the subject splendidly. We will be glad to have your statement for the record.

(The written statement of Mr. Potter is as follows:)

As you all know, a movement for the development of the shales is now being promoted by the Department, through the Bureau of Mines. It is interesting to note that we were faced with an oil shortage in 1917 and 1918, during the First World War, and that we are now again faced with an oil shortage, and again the Department seeks to interest the public and to promote the development of the oil shale.

In 1918 an agitation was started which resulted in the passage of the oil leasing bill of February 25, 1920. The owners of oil shale placer mining claims, being uncertain as to what the effect of such a bill might be, asked for a hearing before the Secretary of the Interior, and such a hearing was granted, at which Assistant Secretary Vogelsang presided. I believe this was about February 21, 1918. There were present at this hearing, from the Department, E. F. Finney, Solicitor; George Otis

Smith, Director of the United States Geological Survey; Van H. Manning, Director of the Bureau of Mines; and Clay Tallman, Commissioner of the General Land Office. There were also present a number of Senators and Representatives from Colorado, Utah, and Wyoming.

After this hearing we were assured by the Secretary and the other gentlemen representing the Government that, while they favored the enactment of the leasing law they would cooperate with us in having our oil shale placer-mining claims excepted from the operation of that law. Solicitor Finney; Senator Charles E. Thomas, of Colorado; Mr. John H. Fry and myself conferred together and agreed upon the clause excepting the oil shale placer claims from the operation of the leasing law. With slight modifications our proposed clause became section 37 of the oil leasing bill.

At the special request of the Department, we appeared before the Public Lands Committee of the House on the 26th day of February 1918, and were given every assurance, both by the Department and the member of the committee that our rights would be fully respected and that we might expect the full cooperation of Government in our effort to develop the shales. There is no doubt a complete record of these hearings. . . .

I would call your attention to the fact that the companies which I represent are made up of ordinary people of limited means, who became interested in the oil shales through the promotion of the Department itself. . . .

Exhibit C-317. April, 1954, Bureau of Land Management Monograph, "Mining Locations, Entries and Patents" (p. 23):

There is a variance between the amount of mineral that must be found to prove a valid discovery. Thus, where a discovery is made in a new area the showing of mineral must be better than where previous workings

have shown that a minor mineral showing at the surface usually results in the finding of valuable deposits at depth. The amount, however, may differ in accordance with the size and continuity of the vein. If a vein is narrow the amount of mineral showing per ton or the indications must be more to justify a discovery than if the vein is wide. This is self-evident since in the former, it is necessary to mine worthless rock on one or both sides of the vein in order to remove the mineral bearing material and the average value of the mined material per ton is correspondingly reduced.

Where discovery is made in a recognized mining area other elements in addition to the amount of mineral disclosed and the size and length of the vein need to be considered. The major one is what other mines disclose that reasonably bear on the future possibilities of the claim in question. In a series of cases arising within a limited area in the Coeur d'Alene Mountains in Idaho, the Department has recognized that past developments have shown that in a mine based on a discovery in a surface vein or veinlet or shear zone of minute fractions of siler, lead or copper a rich pay ore at depths up to 1,500 feet is frequently encountered. *Lincoln Mining Co.*, A-21978, December 22, 1939 (unreported). That case cited the Commissioner's decision of August 9, 1915, in Coeur d'Alene 08480, recognizing a similar discovery, also *Oom Paul Consol. Mining Co.*, D-22955 of July 23, 1915, (unreported) and other cases. Of similar purport in another developed area see *East Tintic Consolidated Mining Co.*, 43 L.D. 79, reversing 40 L.D. 271 and 41 L.D. 255. See also *Freeman* v. *Summers*, 52 L.D. 201. Obviously, such cases can only be followed in the particular area where the rule has been established. What has been established in the Coeur d'Alenes for example cannot be the basis of a holding in the Rocky Mountains. The rule does not extend to surface or shallow showings which do not contain even a trace of the valuable mineral presumed to lie at depth. *Austin* v. *Mann*, 56 I.D. 85 (Coeur d'Alene). In other words, mineral must be found. . . .

Exhibit C-788. Legislative History of Act of July 20, 1956, 70 Stat. 592, 30 U.S.C. Section 122 (pp. 2-7):

2. Excerpts from Transcript of April 23, 1956, Hearings on H.R. 6501 Before the Subcommittee on Mines and Mining of the House Committee on Interior and Insular Affairs:[1]

Representative Wayne N. Aspinall, of Colorado, who had introduced H.R. 6501:

> [T]his bill would amend that Act [Act of July 17, 1914] to allow patent to be granted under the mining laws so long as the claim involved was valid prior to the passage of the Act of 1920 and providing that their validity is maintained. This bill would not bestow any right on claims which have, or which will, lapse.... (pp. 2, 3)
>
> As it now stands, if a mining claim exists on a leasable mineral under land upon which a non-mineral surface right has been granted under the Act of July 17, 1914, the only way this valid right can be taken to patent is for the mining claimant to obtain and reconvey to the government the surface title. After this, the mining claim can be granted and patented and the surface right can be reestablished. Thus, if the surface owner refuses to cooperate in this process, the mining claimant is left with a valid right—but a right foreshortened by his inability to obtain patent. (p. 3)
>
> * * * *
>
> In my own area, this would affect mining claims for oil shale, a mineral or oil bearing rock reserved under the Leasing laws. (p. 4)
>
> * * * *
>
> This matter first came to my attention in a case where there exists an isolated tract of land surrounded on all sides by patented shale lands or

[1] Since the transcripts have not been edited, reproduction of them cannot be made, without authorization from the House of Representatives. The transcripts can however be inspected, and copied by hand; that was done in preparing these excerpts.

claims upon which patent is about to issue. This isolated tract is covered by both valid mining claims established under the mining laws and by surface rights granted under the Act of July 17, 1914 (38 Stat. 509; 30 U.S.C., secs. 121-123). It is a sort of 'no man's land'. The surrounding land was also covered by surface rights under the above act, but the mining claimants were able to obtain the cooperation of the surface owner and thereby obtain patent to their mining claims. As it now stands, these claims have little value for mining due to their uncertain status relative to surrounding lands. This legislation would seem to fill out the intention of previous law by allowing patent on this land just as it is now allowed on withdrawn land where agriculture entry has not resulted in a surface patent. (pp. 4, 5)

* * * *

The law of 1914 which provides for the reservation of minerals and patents to be issued at that date did not make it possible to gain a patent on mineral claims which were validly entered into between 1914 and 1920. In my district there are a few cases—and we do not know how many but there are a few of them—where there is a valid existing mineral claim to oil shale where there was also a patent on the surface rights of the same land. In one particular case the owner of the surface rights through a patent issued by the government has refused to reconvey any surface rights to the government so that the government then could issue a new patent including the minerals in the area and thereby permit the new patentee to give a deed to the owner of the surface lands. (p. 7)

By so refusing, even though he was offered a good price for his cooperation, he has by his action prohibited the owner of the minerals to secure a patent which was intended should be the case when the law was passed. In other words, the 1914 law did not have as a part of its intention the denying to a

person who did establish a valid mining claim the right to proceed to patent. (p. 7)

Mr. Lewis E. Hoffman, Minerals Staff Officer:

I might say, statistically, I have the figures here:

From 1946 to 1955 inclusive, we patented 67 oil shale claims [sic-patents] mostly in Colorado, amounting to 84,602-plus acres; three oil and gas claims amounting to 480 acres, and one sodium claim amounting to 1760 acres. The sodium claim was in California. The oil shale patents were in Colorado and one in Utah. There were several also in California, which are the only three states really affected by minerals leasing. (p. 13)

. . . I hope the committee passes the bill or reports favorably on it.

3. Excerpts from Transcript of May 1, 1956, Hearings on H.R. 6501 Before the House Committee on Interior and Insular Affairs (testimony by Representative Aspinall):

* * * this does not have to do with any other minerals except the leasable minerals to which no one can get a patent since 1920, but these leasable minerals were patentable up until 1920, and this refers only to them. As far as I know, there are only just a few cases that are involved, and most of those cases are in the oil shale lands of eastern Utah and western Colorado. That is all this bill refers to. (pp. 3, 4)

4. Excerpts from Senate Report No. 2524, July 11, 1956:[1]

The Committee on Interior and Insular Affairs, to whom was referred the bill (H.R. 6501). . . having considered the same, report favorably thereon and recommend that the bill do pass.

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[1] The House Report, No. 2198, was similar.

OBJECTIVES OF H.R. 6501

If enacted, H.R. 6501 would amend a 1914 Act of Congress so as to permit holders of valid and subsisting rights to certain mineral deposits acquired by discovery and location made under the mining laws of the United States prior to the date of February 25, 1920, to perfect the titles thereto by obtaining patent to the mineral estate only. This would obviate the present requirement, impossible to meet in some cases, that holders of such claims, in order to obtain patents thereto, must first obtain the outstanding interest of the surface owner and thereafter reconvey the surface estate to the United States; a patent to the mining claim, including both mineral and surface estates, is then issued to the mining claimant. . . .

Under the Department of the Interior decision in the case of James W. Bell (52 I.D. 197 (August 1927)) the owner of a valid mining claim located before February 25, 1920, on lands covered by the 1914 act, in order to obtain a patent to the minerals, is required to acquire the outstanding interest of the surface owner and thereafter to execute a deed of reconveyance to the United States; subsequently, a mineral patent to the land, including both the surface and minerals, is issued to the mining claimant. From 1946 to 1955, inclusive, 71 mining claims, including 67 oil shale claims, were issued under this procedure. The Committee is informed that in a few cases mining claimants have been unable to obtain the cooperation of the owners of the surface estate and have been prevented thereby from obtaining patent to the mineral estate.

If enacted, H.R. 6501 would permit a qualifying mining claimant to be issued a patent to the mineral estate without requiring a reconveyance of or otherwise disturbing the surface estate. . . .

DEPARTMENTAL REPORT

Department of the Interior
Office of the Secretary
Washington, D. C., March 20, 1956.

Hon. James E. Murray,
Chairman, Committee on Interior and Insular Affairs, United States Senate, Washington, D. C.

My Dear Senator Murray: This is in reply to your request for the views of this Department on S.2115, a bill to amend the act of July 17, 1914, to permit the disposal of certain reserved mineral deposits under the mining laws of the United States.

* * * *

. . . the problem which S. 2115 is presumably intended to clear up concerns valid and subsisting rights acquired by discovery and location under the mining laws made prior to the enactment of the Mineral Leasing Act of February 25, 1920 . . . .

* * * *

The apparent purpose of this bill is to obviate the necessity for requiring such as reconveyance and to permit the locator or his successor in interest to be issued a patent for the reserved minerals which are subject to valid and subsisting rights acquired by discovery and location under the mining laws.

Though we heartily endorse the purpose of S. 2115, we believe that certain amendments of a clarifying nature would be desirable . . . .

WESLEY A. D'EWART,
Secretary of the Interior

The Senate Committee on Interior and Insular Affairs recommends the enactment of H.R. 6501. (1956 U.S.C. C.A., pp. 3391-94)

Exhibit G-319-A. American Petroleum Institute "*Facts and Figures*", 1958 Cent. Edition, "*Average Price Per Barrel of Crude Oil at the Well, By States, 1900-1958*:

Average United States	Year
$3.01	1958
.....	.....
3.07	1920
2.01	1919
1.98	1918
1.56	1917
1.10	1916
.64	1915
.....	.....

Exhibit C-356. September 9, 1957, Memorandum to Area Administrator, Area 3, on "Sufficiency of Discovery for Oil Shale Placer Claims", from Director, Bureau of Land Management (pp. 1-2):

The Department concluded on May 10, 1920 (47 L.D. 543) that oil shale is a valuable mineral subject to location and entry under the mining law. These "Instructions" have never been overruled or vacated and they bind the Bureau until they have been.

. . . .

In summary, the question of sufficiency of discovery for oil shale placer claims in any area occupied by the Green River formation has been resolved where the conditions are comparable to those found in the lands involved in *Freeman* v. *Summers*, supra.

Exhibit C-885. December 4, 1963, Mineral Report on Mountain Boy Claims, by James F. McIntosh, Valuation Engineer (Mining) (p. 2):

The surface of the claims is generally rolling with some timber areas, some sagebrush areas and some scrub oak and mountain spirea areas. The timber is non-commercial. . . .

There are no recent workings on the Mountain Boy 1, 6, and 7 Lode Mining Claims. This seems to indicate that the applicant plans no actual mining operations at the present time. On the other hand there is great speculative value to the land embraced in the claims for their oil shale content and only nominal value for other uses. . . .

Exhibit C-886. September 22, 1964, Report on the Mountain Boy claims, by Daniel T. Meschler, Geologist (p. 4): The climate is generally arid. Temperatures are warm to hot during the summer and cold in the winter. The area is subject to severe winter storms. . . .

Exhibit G-97. U.S.G.S. Circular No. 523, *"Organic Rich Shale of the United States and World Land Areas"* (1964) (p. 13):

Known parts of the deposits that yield 25-60 gallons of oil per ton contain about 450-500 billion barrels oil equivalent in the Piceance Basin, Colo., about 90 billion barrels in the Uinta Basin, Utah, and about 30 billion barrels in the Green River basin, Wyo., totaling about 600 billion barrels for the three basins. Approximately 160 billion barrels oil equivalent is in part of this higher grade shale averaging 30-35 gallons of oil per ton in units more than 25 feet thick and lying less than 1,000 feet below surface. Assuming that approximately half of this higher grade more accessible shale could be mined under present conditions, about 80 billion barrels of shale oil is herein considered recoverable by demonstrated mining and retorting methods.

Known oil-shale deposits that yield 10-25 gallons of oil per ton contain about 800 billion barrels oil equivalent in the Piceance Basin, Colo.; about 230 billion barrels in the Uinta Basin, Utah; and about 400 billion barrels in the combined Green River basin and Washakie Basin, Wyoming.

Known shale deposits that yield 5-10 gallons of oil per ton contain about 200 billion barrels oil equivalent in Colorado, 1,500 billion barrels in Utah, and approximately 300 billion barrels in Wyoming.

The possible extensions and possible upward revisions of the oil-shale resources of the Green River Formation are estimated to be about equal to the known resources. The larger undiscovered better grade resources are perhaps in the deeply buried parts of the formation in the Uinta Basin.

Exhibit G-722. Deposition of J. Blount Mull (pp. 12-22):

[12] average crude shale oil.

Q. One would have encountered problems, or would one not have encountered problems in refining high sulfur, high nitrogen California crude circa 1915 or 1920?

A. Excuse me. I am not sure of the question. One would have—

Q. Would one have encountered problems in refining high sulfur and high nitrogen in California crude—

A. Yes, that is true because at that time the principal —you might say the most commonly-used process in refining for reducing both sulfur and nitrogen was strong treatment with strong sulfuric which entailed large losses.

Q. Those losses roughly would vary depending upon the percentage concentration of sulfur and nitrogen, would they not?

A. That's right, yes. That's right.

Q. Is it not a fact, Mr. Mull, that petroleum products produced by thermal cracking processes would have had some of the characteristics of retorted shale crude?

A. That's right. That's right, because they are both the result of destructive decomposition.

Q. By heat?

A. Yes, heat and pressure.

Q. Do you happen to know whether any thermal cracking processes were common employment in this period, 1910 to 1920, in the United States?

A. Well, certainly not in 1910 but by 1920 there were two or three processes that were in the early stages: the Dubbs and I believe Standard of New Jersey. I have forgotten what they called [13] their process but they weren't very old then.

Q. How about the Burton process?

A. The Burton was the same category. It was the first process and I remember seeing the first Burton still on an engineering inspection trip either in my junior or senior year in college, which would have been between 1919 and the spring of 1921, and it was quite new. I don't know how old, but I would say between five and seven years that the first still was used at Whiting refinery. So it was after 1910, I am sure, and not long before 1920.

Q. Do you know, Mr. Mull, what percentage of gasoline in the latter part of, let us say, 1918 was cracked gasoline that was sold in the United States?

A. Well, I should judge a very small, just as a rough estimate, probably less than 10 to 15 percent of the total gasoline.

Q. Do you know?

A. I don't know for sure.

Q. Do you know at all?

A. Beg pardon?

Q. I mean what information do you have?

A. Just by memory.

Q. Of what?

A. Of the industry at the time.

Q. Your memory is that it was something like 10 or 15 percent?

A. Yes, of the total gasoline volume.

Q. Was cracked gasoline?

A. That's right.

Q. Cracked gasoline was relatively high in olefins, was it not?

A. That's right.

[14] Q. It was possible to make a commercially acceptable product out of it, was it not?

A. That's right.

Q. As a matter of fact, Mr. Mull, it was possible to make a commercially acceptable gasoline product out of shale crude, was it not?

A. That's right.

Q. The question to which you direct yourself in your testimony is to the comparative economics of the step, is it not?

A. That it was what?

Q. What you talk about in your direct testimony, I take it you are expressing the opinion it would have cost more to do so?

A. That's right.

Q. Than it would to deal with some petroleums?

A. That's right.

Q. But not that one could not do it?

A. That's right.

Q. In fact, Mr. Mull, there are some products out of shale crude that are acceptable that can be made without refining steps at all? Isn't that right?

MR. MESCH: What are you speaking of, what time, the present?

MR. HULBERT: I am talking about, say, 1920.

THE WITNESS: 1920? Well, the only product that I could think of would be heavy oil used under steam boilers where the specifications were very lax and indefinite at the time. I know of no other product that could have been made from shale oil without extensive refining.

MR. HULBERT: Q. But you think that some heavy boiler fuel—

[15] A. The crude oil itself could have been used, providing your fuel tanks had steam coils for keeping it in fluid condition, pumpable condition, but it could have been used under heavy boilers, heavy furnaces.

Q. Are you familiar with the present-day specifications for No. 6 fuel?

A. I haven't seen it for 10 or 12 years, I guess.

Q. Were you familiar with it 10 or 12 years ago?

A. Oh, yes.

Q. There was such a thing 10 or 12 years ago?

A. Yes.

Q. Unrefined shale crude, did it meet the specifications for No. 6 fuel oil at that time?

A. Well, I would hate to answer that question because I don't remember the specification in detail.

Q. If Mr. Harold Thorne said it did, would you be inclined to accept that as an actual statement?

A. I would.

Q. In general, is Mr. Thorne a competent—

A. I consider him so.

Q. —spokesman on questions of shale oil?

A. That's right.

Q. If you and Mr. Thorne disagreed on a point relating to the refining of shale oil, would you be inclined to prefer Mr. Thorne's opinion to your own?

A. Well, that is a hard question to answer, frankly.

Q. At one point you worked for Mr. Thorne, didn't you?

A. No, I never did. I never worked in the same installation even.

[16] Q. At page 46 of your testimony you talk about a page on your belief that Mr. Catlin was misled by the apparent Scotch success without analyzing all factors such as the lower labor costs, the high import duties there which fostered the Scottish industry.

What do you know about the Scottish industry, Mr. Mull?

A. The Scottish industry?

Q. Yes. The oil shale industry in Scotland circa 1915 or 1920.

A. Well, I know that there were a few plants operating.

Q. How do you know that?

A. From what I read in books and publications and from people who had been there.

Q. What were the lower labor costs in Scotland?

A. Well, I can't quote dollars and cents.

Q. How about pounds and shillings?

A. Well, even pounds and shillings, but I know they were considerably lower than in our country at the time, when you compare it with the price received for the products, because there was a high import duty on gasoline and since the local shale products sold for the same price and did not have to pay import duty that was so much extra profit.

Q. What was that import duty?

A. I don't remember what it was at the time.

Q. Do you know when it was put in?

A. No, I don't.

Q. Do you know whether there was a time when there was no such duty?

A. Undoubtedly there was, but—

[17] Q. Why do you say "Undoubtedly there was"?

A. Well, it had to be instituted at some time and when that time was I don't know.

Q. You do not know how much it was or when it was put into effect or when there might have been a time when it was not in effect? Is that right?

A. No.

Q. You do not know what Scottish labor costs were in figures?

A. No.

Q. Do you know what American labor costs were in figures that were higher or lower, as the case might have been? Do you know?

A. No, I don't.

Q. Do you know at what price in figures shale oil products sold in Scotland at the time you are referring to in your testimony?

A. No exact figure.

Q. Do you have inexact figures?

A. No.

Q. At page 53, at the top of that page, you say:

"The experimental refining work at Anvil Point 25 years later leaned toward proving that modern conventional petroleum refining techniques could be adapted to shale oil to produce satisfactory motor fuels, diesel fuels and furnace oils."

A. Yes.

Q. In this statement you never tell us whether the work at Anvil Point not only leaned toward proving those things, but whether or not they were proved. I wish you would tell us that now.

[18] A. Yes, I consider that the work did prove that conventional refining techniques could be modified to produce satisfactory products from shale oil.

Q. Some of the techniques do not really have to be modified. I am thinking of hydrogenation.

A. Not appreciably, no.

Q. They just run shale oil through a hydrogenation process?

A. That's right.

Q. That takes out the sulfur and the nitrogen?

A. Reduces the nitrogen, that's right.

Q. It produces a perfectly acceptable product, does it not?

A. That's right.

Q. You can make jet fuel out of shale oil, can you not?

A. Make what?

Q. Jet fuel.

A. I think so, yes.

Q. Well, it has been established, has it not?

A. Sure.

Q. They can make automobile gasoline?
A. Sure.
Q. Diesel fuels?
A. That's right.
Q. Fuel oils of various kinds?
A. That's right.
Q. The Bureau of Mines ran its automobiles and trucks on shale gasoline, did it not?
A. That's right.
Q. The Denver and Rio Grande Railway has run its locomotives—
A. Diesels, that's right.
Q. Are you familiar, Mr. Mull, with the report of the National Petroleum Council in 1951?
[19] A. Yes, I remember that it was done. I am vaguely familiar with it, although that is a long time ago.
Q. Not as long ago as 1920?
A. No. That's right.
Q. Do you recall what conclusion that report came to?
A. I couldn't quote it verbatim.
Q. Do you recall the conclusions expressed by the Bureau of Mines around the same time?
A. Yes.
Q. As to the economic feasibility of an oil shale operation?
A. Yes.
MR. WITHAM: Just a minute. Repeat that question. I may object to the form of that question.

(Question read.)

MR. WITHAM: If that question implies that the N.P.C. study reached a conclusion that oil shale was economically feasible, and the answer, then I object to the form of that question.
Is that what you are intending?
MR. HULBERT: No. Let me say I am distinguishing between conclusions expressed by the Bureau of Mines from the N.P.C. study. I appreciate, as you do, that the Bureau cooperated in the N.P.C. study but I do not attri-

bute its conclusions to the Bureau of Mines necessarily. The Bureau of Mines made some utterances of its own, which is the question I was asking Mr. Mull, whether he was familiar with them, and he said he was.

MR. WITHAM: Are you asking Mr. Mull to support a conclusion that there was a finding of economic feasibility?

[20] MR. HULBERT: No. I am just asking Mr. Mull whether he is familiar with utterances of the Bureau of Mines as to the economic feasibility of oil shale around the time of the N.P.C. study. That was the question.

THE WITNESS: My memory is that the conclusions reached by the industry in this report were slightly less optimistic than some of the figures published by the Bureau of Mines. I can't quote the difference but, in other words, the industry as I remember it estimated that crude oil, competing crude oil prices would have to be slightly higher than the Bureau of Mines figure, and I can't quote the figures.

MR. HULBERT: Q. I think the Bureau of Mines reports expressed the honest opinions of the people in the Bureau of Mines?

A. I think it did.

Q. Did you ever know the Bureau of Mines to put out a consciously dishonest report?

A. I don't.

Q. Have you ever made a study of the economics of an oil shale operation at any point in time?

A. No. I assisted in some of the calculations that were made at Rifle but I have never made any independent study on my own.

Q. Any opinion you express on the economic feasibility of oil shale would therefore be based on the published work of others?

A. And my own experience, what I have seen in the industry.

Q. Mr. Mull, I as trying to find out what work you have done on [21] the economics of oil shale. You said you have never made any calculations?

A. That's right.

Q. So you do not know what it would cost? Is that right?

A. That's right.

Q. You do not know what it would cost to mine a ton of oil shale now or at any time? Is that right?

A. No.

Q. You do not know what it would cost to refine a ton of the shale crude from a ton of oil shale?

A. Of course, those figures change, particularly from a refining standpoint, change as the years go by or with the additional development in refining techniques.

Q. The one thing one can be confident about in refining, isn't it true, Mr. Mull, is that things will get better?

A. What?

Q. Things will get better in the sense we will learn to do things we now have difficulty doing?

A. Undoubtedly.

Q. Isn't that the history of refining as you know it?

A. That is true.

Q. Isn't it also true that the basic refining processes that are or have been over the last 30 or 40 years in use have been known in principle for a very long time?

A. Well, fundamentally, yes.

Q. I mean hydrogenation goes back, does it not, to processes devised in the late 19th Century?

A. Yes, in Germany, I think.

[22] Q. The Germans used it on a commercial scale during the First World War, did they not?

A. That is right.

Q. Had there been the occasion to do so, presumably the Americans could have done as much?

A. Sure. That's right.

Q. Catalytic cracking, which has come in fairly recently—Is that true?

A. That's right; during World War II, largely.

Q. But a lot of petroleum refining catalysts were known in the 1880's, were they not?

A. Yes, that's right.

Q. So that at any point in time one can be reasonably confident, based on the history of inventiveness of man, that refining techniques can be improved?

A. That's right.

Q. One would have had that confidence about shale oil refining in 1920, would one not?

A. Yes. That is true.

Q. The events of more recent times have demonstrated how justified that confidence would have been?

A. Yes.

. . . .

Exhibit G-723. Deposition of H. M. Thorne (Part II, pp. 14, 28):

[14] Q. You held at least during the last 10 years or so of that period responsible positions directing research on the subject of oil shale, did you not?

A. Yes. And the last about six years I was research director of the entire Center which includes both oil shale and petroleum.

Q. When you refer to the entire Center you mean—

A. The Laramie Petroleum Research Center.

Q. Of the Bureau of Mines of the Department of Interior?

A. That is right.

. . . .

[28] A. I was doing experimental refining work on shale oil at Boulder, Colorado.

Q. Interrupted for a brief time by return to Bartlesville?

A. Returning to Bartlesville.

Q. At that time from a technical point could one have made the major petroleum products from Colorado shale oil?

A. Gasoline and kerosene, certainly, yes, could have been made. Fuel oil, certain grades.

Q. As of the period prior to 1920, Mr. Thorne, do you have any reason to suppose that the major products that were then being made from petroleum, so far as you may be aware of what they were, could not have been made from Colorado shale oil as a technical matter?

A. Before 1920?

Q. Yes. As a technical matter.

A. I think they could have been, those major products.

. . . .

Exhibit G-290. Prepared Direct Testimony of Department of the Interior Jack E. Phillips (pp. 61-62, 146):

(61-62) Beyond Catlin's activities, renewed general interest in the oil shales of the United States did not come about until after 1914 when the U. S. Geological Survey published the results of an investigation of the oil shales of western Colorado and Utah (Woodruff and Day. G. S. Bull. 581, 1914). This report and subsequent ones over the next few years, coupled with growing concern about the adequacy of the country's petroleum reserves, sparked considerable activity prior to 1917 in acquiring oil-shale claims and possibly in a few instances in initiating experimental work on processing of oil-shale.

. . . .

(146) Q. What was the purpose in preparing the process designs as of 1920 and as of today, i.e., the overall plan to be followed and the object sought to be accomplished?

A. The purpose in each case was to provide a basis for evaluating the prospective cost and profitability of a commercial scale, oil-shale venture. The overall plan was to approach the design problem from the position of someone who was seriously considering the possibility of engaging in such a venture, but who wanted first to determine whether or not he had a reasonable prospect of financial success. In both cases—1920 and the present

time—the designs were to be based on the then-current thinking and state of knowledge, augmented by whatever assumptions were found to be necessary and reasonable in order to cover all design aspects from the oil shale mine to finished products.

. . . .

Exhibit G-331-A. Prepared Direct Testimony of Department of the Interior Witness Bruce Netschert (pp. 15-16, 25):

(15-16) Although earlier individual geologists had examined the oil shale occurrences, the first work by the Survey was undertaken in 1913 by two geologists who examined outcrop at several widely separated points "with rather discouraging results." [2] Their report was published in 1914.[3]

This was followed in succeeding years through 1918 by the work of other Survey parties, the most significant of which was that done by Winchester. The latter mapped and studied in detail most of the outcropping of the oil shale beds in Colorado, Utah and Wyoming and took numerous samples "to determine the approximate value of the shale as a future source of shale oil." [4] Other workers investigated occurrences in Montana, Idaho and Nevada. Winchester's report, published in 1916, can be credited with bringing the oil shales to the attention of the public at large. Locally, prospectors and entrepreneurs were attracted to the oil shale, and private engineers and geologists were brought in to examine and appraise the deposits. By 1918 it was apparent that the oil shales constituted a potential resource for liquid fuels of enormous size. Partly as a result of Winchester's efforts, the Navy, in 1916, set aside portions of the government land in Utah and Colorado which contained oil shale beds as Naval Oil Shale Reserves.[5]

At the same time the public awareness of the oil shale potential was spreading, developments on the petroleum scene were focusing attention on that potential as the successor to petroleum in providing liquid fuels. The demands of World War I placed a heavy drain on do-

mestic production and brought to the attention of government and industry a still greater liquid fuel demand that lay ahead as the Automobile Age began in earnest. So rapidly had demand increased because of the War that, although production had increased apace, the discovery of new reserves was lagging. Authoritative estimates of remaining oil reserves of 5.7 billion barrels in 1914,[6] 7.6 billion barrels in 1915,[6] 6.2 billion barrels in 1917,[6] 6.7 billion barrels in 1919,[7] and 7 billion barrels in 1920 [8] gave ominous implications to the decline.

In 1917 the Director of the Bureau of Mines was reporting to the Secretary of the Interior that:

> Because of the threatened shortage of petroleum from oil fields in this country for the future these shales are considered to be the principal reserve in this country for the future supply of gasoline and other petroleum products . . . the investigations may lead to the belief that it is now commercially feasible of work selected deposits of shale in competition with oil from oil wells, and that these oil-shale reserves can be considered of immediate importance to the oil industry.[9]

In the immediate post-war years the petroleum situation worsened. In 1919 Winchester was stating with alarm:

> A glance at the figures showing the relation of the amount of petroleum consumed each year to the amount produced reveals the startling fact that the consumption has been rapidly approaching the production, and since 1915 it was even necessary to actually draw on the reserves in storage in order to meet the increased demands, and this while our oil men were straining every nerve to increase the output of petroleum both by discovering new fields and by developing to the limit the proven areas.
>
> . . . .

(p. 25) A common characteristic of announcements by these ventures was unbridled optimism. From the present vantage point it is apparent that this optimism was

in large measure genuine; for in many instances it was the organizer's own money that was being spent so freely and with such inadequate preparatory investigation.

Testimony. Department of the Interior Witness John Donnell (Transcript of 1967 Hearing, pp. 145, 172, 259, 522, 525-527):

(p. 145) A. In the area of the contested claims, the oil shale that would assay an average of fifteen gallons per ton has a continuous thickness of between five and six hundred feet. In the center of the basin the oil shale that would average more than fifteen gallons of oil per ton would be approximately 2,000 feet thick.

Q. Can you make such a comparison on the basis of, say, 30-gallon oil shale?

A. Roughly.

Q. Would you do that?

A. The oil shale in the area of the contested claims that would average 30 gallons of oil per ton would be about fifty feet thick, and in the center of the basin would be about a thousand feet thick.

. . . . .

(p. 172) Q. Do any of the contested claims contain an exposure of the Mahogany Ledge?

A. Yes.

Q. Will you state which claims?

A. The Harold Shoup No. 1, Harold Shoup No. 4, the Harold Shoup No. 3, the Mountain Boy No. 7.

Q. Do any of the claims contain within their limits an exposure of the Mahogany Bed?

A. The same claims that I have just mentioned.

Q. Is the surface of any of the other contested claims within what has been termed the Parachute Creek member of the Green River Formation?

A. Yes, it is.

Q. Will you identify the claims?

A. Mountain Boy No. 6, the Harold Shoup No. 3 and the Mountain Boy No. 1.

Q. I believe you mentioned the Harold Shoup No. 3 previously.

A. Oh, pardon me. Harold Shoup No. 2. I'm sorry.

. . . . .

(p. 259) A. Well, the oil shale is quite consistent in oil content and in thickness. Over fairly wide areas it does vary slightly and this variance could account for the difference in the thickness of the shale that would yield an average of 42 gallons per ton.

Q. Do you have an opinion, Mr. Donnell, as to whether the information shown by this exhibit with respect to the lower portion of the Parachute Creek member would be applicable to the area of the contested claims?

A. In general it would be comparable to the lithology in the lower portion of the contested claims.

MR. MESCH: I would like to offer Exhibit No. 516-A.

(p. 522) Q. Mr. Donnell, do you have any doubts that the area in this oil shale peninsula portrayed in Contestee's Exhibit 609 the surface of which lies in what you call the Evacuation creek member contained below it what you call the Mahogany Ledge?

A. No, I don't.

Q. Did not your predecessors in the geology of this area, Mr. Woodruff, Mr. Winchester, Mr. Day and Mr. George share your conviction that the rich oil shale is down there?

A. Yes, they did.

Q. And their maps showed that, did they not?

. . . . .

(p. 525) Q. Mr. Donnell, almost the last point in your testimony you were asked to calculate the oil content per acre in barrels, the 30-gallon segment of Mahogany Ledge in the area of the claims, and you gave the answer as a hundred thousand.

A. I said roughly.

Q. Approximately, of course.

A. Approximately, yes.

Q. The transcript at that point is not very clear, and I wanted to ask you, therefore, whether that figure was a figure per acre rather than per claim.

A. That was per acre.

Q. Per acre. Mr. Donnell, another point in your testimony, you said that the 15 foot segment in the Parachute—excuse me—the 15 gallon segment in the Parachute Creek member of the Green River Formation as you classified it, in the area of these claims would be about 500 to 600 feet thick. Taking 500 feet—

EXAMINER DALBY: Wait a minute.

Did you answer?

MR. HULBERT: He nodded.

THE WITNESS: Yes.

Q. (By Mr. Hulbert) What is your answer?

A. In the affirmative, yes.

Q. Taking 500 feet, to be conservative, can you tell me approximately the oil content in barrels per acre in the

. . . . .

(p. 526) area of the claims in that 15 gallon segment?

A. If you will give me a moment.

Q. I shall be happy to give you a moment.

A. Approximately 600,000 barrels.

Q. Per acre?

A. Per acre.

Q. That would not include, am I right, any oil shale that might lie in what you call the Evacuation Creek member and would also not include any oil in the—what, the lower part of the Parachute Creek member?

A. That's correct.

Q. Or in the Garden Gulch member?

A. That's correct.

Q. 600,000 barrels an acre, you would get then, for assuming you had 160 acres of claim which included this 500 foot section, you would get a total of what per claim?

. . . . .

(p. 527) A. 96 million. I said 'over."

. . . . .

Q. If you were to take—if you were to assume that each of the claims contain—a couple of them don't— this much of all of the 500 foot 15 gallon sequence below the

surface, if nothing had been eroded over the nine claims involved in this litigation, you would get something like what, 900 million barrels of oil, a ratio of a hundred million per claim, is that right?

A. That's right.

Testimony. Department of the Interior Witness James McIntosh. (Transcript of 1967 Hearing, pp. 1080-81):

(p. 1080) Q. (By Mr. Morgan) Mr. McIntosh, is it the only formal written report that you have prepared in examination of the Mountain Boy 1, 6 and 7?

A. Well, I haven't seen it, but I presume it is.

Yes, this is the only report, the only formal report I have prepared.

Q. There is no doubt in your mind, I take it, that the Mahogany Ledge underlies these three claims, is there?

A. That's right, there is no doubt.

Q. You were at the hearing last month when Mr. Donnell testified as to the amount of oil to be found in this section, in these claims, thirty gallons per ton or richer, and other (p. 1081) sections, fifteen gallons per ton or richer? Do you recall that?

A. Yes, I do.

Q. Do you agree with the substance of what he said at that time, do you not?

A. Well, it sounds reasonable. I didn't make the calculation myself.

. . . . .

Q. And it's approximately correct?

A. Yes.

Testimony. Department of the Interior Witness Alan D. Campbell (Transcript of 1967 Hearing, pp. 1471-1476):

(p. 1471) Q. Mr. Campbell, in the course of your historical survey, you reviewed some newspapers and the Shale Review, and the Wadleigh Collection, and other documents you referred to, did you not?

A. Yes.

Q. Isn't it a fact that in going through those documents that you acquired a great number of statements referring to the wide spread beliefs that the country was running out of petroleum?

MR. WITHAM: I object to that. It's beyond the scope of the direct examination.

EXAMINER DALBY: Your objection is overruled.

A. Yes.

(p. 1472) Q. (By Mr. Hulbert) And you found, did you not, in the same period quite a number of references to the health and size of the Scottish oil shale industry?

A. Yes.

Q. And its profitability?

MR. WITHAM: I object to that.

EXAMINER DALBY: Overruled.

A. What do you mean by "profitability"?

Q. (By Mr. Hulbert) The fact that it was making money, statements that it was.

A. Yes.

Q. And you found, did you not, a number of reports of statements by high officials of the United States Government encouraging interest and development of oil shale, did you not?

. . . . .

(p. 1473) EXAMINER DALBY: The objection is overruled. The witness is evidently able to answer the question.

Would you continue.

THE WITNESS: This is Van Manning, you are talking about?

(p. 1474) Q. (By Mr. Hulbert) Yes.

A. Yes.

Q. And the director of the United States Geological Survey, George Otis Smith?

A. Yes.

Q. And the Secretary of the Interior himself, Mr. Franklin K. Lane?

A. I don't remember.

Q. The Governor of Colorado?

A. Who is that? I don't remember.

Q. I have been in Colorado long enough in the course of this case that I feel I should be able to pass a civics exam. But I don't remember.

. . . . .

(p. 1475) Q. (By Mr. Hulbert) The question is whether or not you did not encounter prior to 1920 in the course of your research, reports of statements by Mr. Duce encouraging interest in and development of oil shale?

A. Yes.

(p. 1476) Q. And Mr. R. D. George, State Geologist of Colorado?

A. Yes.

Q. And Mr. Dean E. Winchester of the U. S. Geological Survey?

A. Yes.

Testimony. Department of the Interior Witness Dr. William Vogely. (Transcript of 1967 Hearing, pp. 2952-53):

(p 2952) Q. Do you, Dr. Vogely, have an opinion as a result of your study as to whether oil shale in its natural state, without processing, ever had any value?

A. Yes, I think oil shale in its natural state, without any processing, had a value as a possible source of future shale oil.

Q. If oil shale ever had any other value, what would that have been?

A. I don't think it had any other value.

EXAMINER DALBY: When you answered the question, you spoke in the past tense. Does it have a value now as a possible future—

THE WITNESS: I think it had and has. I think the question was asked in the past tense.

Q. (By Mr. Witham) Was there any time when, during the course of the testimony you have given from 1917 to the present, do you feel that this value, are there any periods during this time when you feel it had no value?

A. I think as a source of future petroleum it would have a very low value during the period of the 30's and many deposits would probably have a zero value during that period, but this would be the period of lowest value for this purpose.

Q. Could you state whether the value you are talking about is or was a present value, whether it is or has been a possible future value or what, and explain?

(p. 2953) MR. HAMILTON: Especially or what?

THE WITNESS: It had a present value as a future source of petroleum.

Q. (By Mr. Witham) Did it have a value, in your opinion, for current exploitation?

A. No.

Q. And what period of time does that answer refer to?

A. In my opinion, that answer refers to the entire period of time.

Testimony. Department of the Interior Witness George Horn. (Transcript of 1967 Hearing, pp. 3118-19):

(p. 3118) Q. (By Mr. Hulbert) Mr. Horn, I put up on this easel a map which has been admitted in this litigation as Contestee's Exhibit 609, which is basically a map of most of Township 7 South, Range 97 West, with some of the adjacent area, and ask you whether you are at all familiar with this part of the country?

A. Yes, I am. I don't know whether in this specific area.

Q. And is it not a fact, Mr. Horn, that the land embraced within the outline of the Green River Formation within the green and red line on this map which mark the top and bottom of the Mahogany Zone contain within them oil shale many times richer and thicker than your 15 gallon 15 foot test which the U. S. Geological Survey made?

A. I don't understand your question. You said the base of the Green River?

Q. The Green and red lines represent, as the legend on the map indicates, basically the top and the bottom

of the Mahogany Ledge or Zone, and I am asking you whether the lands bounded by those lines do not contain oil shale thicker and richer by many multiples than the 15 foot 15 gallon test?

A. You are right.

Q. That is correct, is it not?

(3119) A. That is correct. . . .

Q. It is a fact, is it not, Mr. Horn, that the revision of standards for classification of oil shale lands in 1956 reflected in part, as I think you have indicated in your testimony, a survey taken by persons who participated in that decision of the oil shale being then made the subject of commercial exploitation in various parts of the world—Scotland was one place you mentioned—and that that standard reflected a conclusion reached by that body as to the grade of shale that was then being mined commercially in various parts of the world, isn't that right?

A. Yes.

Testimony. Department of the Interior Lester Schramm (Transcript of 1967 Hearing, pp. 3173-3197):

(p. 3173) Q. (By Mr. Hamilton) Well, isn't the literature that you studied that relates to the period from 1920, (p. 3714) from 1915 to 1920, doesn't it indicate that there was a common view that during those years the demand for petroleum and petroleum products in the United States was increasing faster than the supply was increasing?. . .

A. (The Witness) There were statements to the effect that the demand was increasing rapidly and that there was some concern about the supply keeping pace or being adequate for an indefinite period.

Q. (By Mr. Hamilton) And prices—pardon me. Have you finished?

A. I was going to say that—you mentioned a common view. I just know that this was a view, at least.

Q. In the literature?

A. Yes.

Q. And prices had been rising quite rapidly from '15 to '20, had they not?

A. Yes.

Q. And I believe you have testified that there was a widespread knowledge of the Scottish industry?

A. Yes.

Q. And the literature recorded that the Scottish industry was successful from the technological standpoint (p. 3175) in respect of Scottish shale, did it not?

A. Yes.

Q. And it reported also that the Scottish industry was profitable during this period?

A. Yes. I don't have—the Scottish industry was profitable. I believe that it had some Government assistance.

Q. Whatever the reasons, it was, regardless, profitable?

A. It was a going industry and it was continuing.

Q. There was going industry in some other countries at this time, wasn't there?

A. Yes.

Q. And during this period. did the literature not reflect that the Federal Government was encouraging oil shale development?

A. Yes.

Q. And I believe you have already testified that there was very considerable activity—

A. —I might—the Federal Government was even encouraging activity in oil shale, was doing some research and development work. Now, as far as commercial development, I don't know about that. The word "development" was the only thing that was bothering me a little bit.

Q. There was widespread activity over on the Western (3176) Slope, wasn't there?

A. Yes.

Q. There was kind of an oil shale boom, wasn't there, over there in those days?

A. Yes.

Testimony. Department of the Interior Witness Jack Phillips (Transcript of 1967 Hearing, pp. 3289-3290):

(p. 3289) Q. Are you familiar with the fact that there were, prior to 1920, some dozen retorts, either proposed or in the process of erection in Colorado?

A. Yes, I think I have covered about 18 companies in my own testimony.

Q. Forgive me, you and Mr. Schramm to some extent have both dealt—

A. We have, there is considerable overlap.

Q. You don't have any doubt, do you, that the literature in existence by 1920 indicated that there was a great quantity of oil shale in the Green River formation, much of it rich?

A. No, I wouldn't deny it.

Q. Or the literature showed a wide-spread apprehension that the supply of petroleum and its products would become increasingly inadequate to supply an expected increase in demand?

A. This seems to be a fairly common story in the literature, yes. . . .

(p. 3290) Q. And you don't disagree with Mr. Schraam's report of wide reference in the literature prior to 1920 as to the Scottish oil shale industry and its profitability?

A. I would agree with Mr. Schraam's statement this morning on that.

Q. And there were, were there not, in the literature indications of the existence of oil shale industries in other countries?

A. Other than Scotland, yes.

Q. It is a fact, is it not, that prior to 1920 the Federal Government was encouraging interest in oil shale in Colorado?

A. Yes, I think this is an honest assessment. They were doing some work themselves.

Q. Not only by word, but by deed as well?

A. A fair amount of information on their own work and others.

Testimony. Department of the Interior Witness Donald Duncan. (Transcript of 1967 Hearing, pp. 3537, 3539-40, 3544):

(p. 3537) Q. Are you familiar with the general area of the claims that are the subject of this proceeding?

A. Yes.

Q. Have you had any occasion to make any determination as to the potential oil yield in the oil shale within the general area of the claims?

A. I have done some studies of the oil field, yes.

Q. Assuming that the oil shale sequence extends throughout the area of 160 acres within the general area of the contested claims, can you give an approximation as to the number of barrels of oil potential in a continuous sequence of rich and lean oil shale or other materials that would average 30 gallons or more oil per tone of material?

A. For what size area?

Q. 160 acres.

A. 160 acres. Of 30 gallons per ton shale. I think I may have made this computation. (Pause.) I don't believe I've made that computation. As I recall, there's around 40 feet of shale that averages 30 gallons, or a little better. This information, I believe, was summarized by Donnell in one of the exhibits. If the corrections for the specific gravity of rich and lean shale were made and produced little, about 40 feet or a little more of this sequence would average about 30 gallons per ton.

. . . . .

(p. 3539) THE WITNESS: I have finally found this computation of 30-gallon shale.

Q. (By Mr. Mesch) Within 160 acres within the general area of the claims?

A. Yes.

Q. What is the computation?

A. In this I figured 41 and 6 tenths feet of shale (p. 3540) averaging 30.5 gallons per ton, figured about 14 million barrels of oil in a 160-acre plot.

Testimony. Department of the Interior Witness Paul L. Russell (Transcript of 1967 Hearing, pp. 4357-58):

(p. 4357) Q. Did the literature that you read, other than that listed on the sheet, cover quite a volume?

A. I really can't answer this objectively because if I could recall what I read that I didn't list, I would have listed it, so that I really can't answer this. There are some volumes that I read in part that I found dealt primarily with processing or with some aspect other than mining, and then I laid these aside; I didn't list them; I didn't use them. There are others that I may have read that contained essentially the same information that is referenced in some other place and, therefore, I didn't list this. I just can't answer this question. It may be large; it may be small. I think it would be small.

Q. It is true that your reading was not restricted to articles that pertain to the narrow question of mining as such?

A. Oh, certainly not.

Q. You would consider then that you read widely enough in this general field to have given you a pretty complete picture of the literature of that particular era?

A. I think so.

Q. In that connection, I suppose that it is true that you found in that reading that as of about 1917, 1918 and later, and perhaps even earlier, there was great interest expressed in the possibility of producing oil from oil shale?

A. Yes, sir.

(p. 4358) Q. This was included not only in private publications but in Government publications as well?

A. Yes, sir.

Q. Also, I take it that this literature study would have revealed that about this time there was expressed in the publications considerable concern as to the decline of available crude oil reserves?

A. Yes, sir.

Q. And that also there were many articles and statements indicating that there was a probability or possibility that this deficiency in crude oil reserves could be solved by the development of an oil shale industry?

A. Yes, sir. I'd like to clarify one point. The crude oil reserves you're referring to are of the United States, are they not?

Q. Yes, sir.

A. Correct.

Testimony. Department of the Interior Witness James McIntosh (Transcript of 1967 Hearing, pp. 4505-4507):

(p. 4505) Q. Mr. McIntosh, in the course of your economic study and later in preparing your compendium, it is clear, isn't it, that what you have done, you had quite a lot of exposure to literature regarding oil shale?

A. Yes.

Q. Including literature which appeared prior to 1920?

A. Yes.

Q. And it is true that that literature contains, does it not, a substantial volume of statements from various sources, public and private, during the latter half of the second decade (4506) of this century which commented upon a supposedly impending shortage of petroleum or the threat of one?

A. Yes, there was a lot of literature on that subject.

Q. And during that same period, the literature contained, did it not, many statement, public and private, expressing or encouraging interest in the oil shale of the Green River formation, particularly in northwestern Colorado? I am not at this point asking you whether you agree that the statements are accurate or fair or anything like that but simply that the statements in fact were made and do appear?

A. Well, I don't think there are many statements actually specifically encouraging people. There were many optimistic statements that would or could encourage by implication.

Q. Well, statements which, if taken as accurate, would encourage an interest or could be expected to?

A. Yes, by implication.

Q. Whether they were intended to or not is another question, and there were, during this same period, a

number of statements commenting upon the Scottish oil shale industry?

A. Well, yes, generally the literature, part of this literature, was a statement about the Scottish—

Q. It was stated that the Scottish oil shale industry was at that time profitable?

A. It was generally stated so, but there were some (4507) exceptions to that.

Q. And it was a fact, was it not, that during that period the Scottish oil shale industry was profitable in that it was making money and paying dividends?

A. Yes, it was to a limited extent profitable. There were some reservations about that.

Q. And there were, were there not, many individuals and companies engaged in activities of one kind or another in connection with oil shale, particularly in northwestern Colorado, reflected in the literature?

A. Yes, there were.

Testimony. Claim Owners' Witness Arthur Brown (Transcript of 1967 Hearing, p. 4818):

Q. Can you tell us briefly what is in the approximate richness and extent of the Mahogany Ledge or the Mahogany Zone in this area, in the area shown on 609?

A. In our core hole we found 73 continuous feet averaging better than—averaging 25 gallons per ton. This is the Bureau of Mines method of evaluating richness in terms of the number of continuous feet which volumetrically average out to a chosen number of gallons per ton which can be recovered by Fisher assay.

In this Bureau of Land Management core hole there were 77 feet averaging 25 gallons per ton, and by extrapolation between the two we think there are 73 feet on Mountain Boy 6 and 7, because the thickness of the Mahogany Zone increases as you go toward the north toward the center of the basin.

Complaint. (Entered August 20, 1974):

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO

Civil Action No. 74-739

SHELL OIL COMPANY, and
D. A. SHALE, INC., PLAINTIFFS

v.

ROGERS C. B. MORTON
Secretary of the Interior, DEFENDANT

COMPLAINT

Plaintiffs SHELL OIL COMPANY and D. A. SHALE, INC., by their attorneys, for their complaint, allege:

Nature of Action

1. This is a suit for judicial review of a decision of the Board of Land Appeals, Office of Hearings and Appeals, United States Department of the Interior, *United States* v. *Frank W. Winegar et al.*, IBLA 70-549, decided June 28, 1974, reported at 16 IBLA 112. The decision declared plaintiffs' oil shale placer mining claims invalid on the grounds that oil shale has at least since 1917 never been and is not now a valuable mineral. A true copy of the Board's decision is annexed hereto as Appendix A.

Parties

2. Plaintiff Shell Oil Company is a corporation duly incorporated under and existing by virtue of the laws of the State of Delaware and has its principal office and place of business at Houston, Texas. Plaintiff D. A. Shale, Inc., is a corporation duly incorporated under and existing by virtue of the laws of the State of Colorado and has its principal office and place of business at Denver, Colorado.

3. The defendant, Rogers C. B. Morton, here sued in his official capacity, is the duly qualified and acting Secretary of the Interior of the United States, having his official place of business at the seat of the government in Washington, D.C. Under and by virtue of 9 Stat. 395; 5 U.S.C. § 485; 43 U.S.C. §§ 2, 1201; 1950 Reorganization Plan No. 3, 15 F.R. 3174, 64 Stat. 1262, the defendant is charged with the control, direction and supervision of all officers and employees of the Department of the Interior (including the Board of Land Appeals), the administration and enforcement of all laws relating to the public lands and to mining claims thereon, and the issuance of rules and regulations relating thereto.

Jurisdiction and Venue

4. This action arises under the Constitution, more particularly the Fifth Amendment, and the mining laws of the United States, including 30 U.S.C. §§ 22-38, pursuant to which plaintiff Shell Oil Company claims vested rights in and to the Mountain Boy 6 and 7 Oil Placer Mining Claims and plaintiff D. A. Shale, Inc., claims vested right in and to the Harold Shoup 1, 2, 3, and 4 Oil Shale Placer Mining Claims. This action involves the rights of the plaintiffs to enjoy and possess the said claims, and to obtain United States patents for them, and the duty of the defendant owed to the plaintiffs to administer the laws and to process applications for patents upon a proper construction of the laws and rules and regulations promulgated thereunder. The matter in controversy, exclusive of interest and costs, exceeds in value the sum of $10,000. The jurisdiction of this Court is invoked under 28 U.S.C. §§ 1331, 1361, and 2201; and under the Administrative Procedure Act (5 U.S.C. §§ 701-706).

5. Venue is established in this Court under 28 U.S.C. 1391(e).

Background of the Present Controversy

6. Each of the said mining claims was located upon the vacant, unappropriated public domain, and was perfected by a discovery of oil shale, prior to February 25,

1920, the effective date of the Mineral Leasing Act of 1920, 41 Stat. 437, 30 U.S.C. §§ 181 *et seq.* Prior to that date, such lands containing valuable deposits of oil shale were subject to private appropriation, by location and discovery, pursuant to the mining laws, including 30 U.S.C. §§ 22-38. The lands covered by the said mining claims contain extensive, high grade oil shale deposits in the Piceance Creek Basin, Green River Formation. These deposits have at all relevant times been recognized as typical of the most valuable oil shale deposits in the United States and throughout the world.

7. In 1916, prior to the location of the said mining claims, the United States Geological Survey, an expert scientific arm of the Secretary and Department of the Interior established by Congress to aid in the administration of the public land laws, formally classified all of the lands embraced within the said mining claims, and other lands, as valuable mineral lands. This classification was made because of the presence of oil shale deposits that were then regarded as a valuable source of future supplies of oil, gas, and other minerals. A number of changes have since been made in the oil-shale classification of other land, but the land within the said mining claims has continued from 1916 without interruption to the present as officially classified, for purposes of administration of the public land laws, as valuable mineral land.

8. During the several years prior to the Mineral Leasing Act of 1920, federal officials including the Secretary of the Interior encouraged the location of oil shale mining claims and related efforts to bring about commercial production of oil and other products from the oil shale deposits of the Green River Formation, in recognition that supplies of conventional petroleum were dwindling, that demand was increasing, that lesser oil shale deposits had been successfully worked in Scotland and other countries, and that its potential to produce oil made oil shale deposits, such as those in the said mining claims, valuable. During these years they also indicated, to Congress and to the general public, that where locations were made and oil shale deposits such as those

within the said mining claims were found, valid oil shale mining claims could be initiated and maintained under the mining laws.

9. The Mountain Boy 6 and 7 claims were surveyed in 1917, with a view towards their location as mining claims, to correspond to the Northwest Quarter and the Southwest Quarter, respectively, of Section 14, Township 7 South, Range 97 West, 6th Principal Meridian, in Garfield County, Colorado. They were located on the basis of this survey as of January 1, 1918, and again as of January 1, 1919. Thereafter by mesne conveyances they became the property of plaintiff Shell Oil Company.

The Harold Shoup 1, 2, 3, and 4 claims were located as of September 29, 1917, and again as of January 1, 1919, to cover, respectively, the Southeast Quarter, the Northeast Quarter, the Northwest Quarter, and the Southwest Quarter, of Section 23, Township 7 South, Range 97 West, 6th Principal Meridian, in Garfield County, Colorado. Thereafter by mesne conveyances they became the property of plaintiff D. A. Shale, Inc.

10. In enacting the Mineral Leasing Act of 1920, Congress removed oil shale from subsequent virtually free private appropriation under the mining laws, in recognition that oil shale deposits of the Green River Formation, such as those within the said mining claims, were too valuable to continue under the regime of the mining laws and should thereafter only be available by federal lease. Congress recognized that some valid oil shale mining claims had already been initiated, and expressly excepted such claims and the lands embraced within them from the leasing act, specifying that they were to continue to be governed by the mining laws, including those that provide for the issuance of patents for mining claims.

11. In 1920 the first oil shale patent application to reach the Commissioner of the General Land Office (the arm of the Department of the Interior then authorized to process patent applications and to issue patents) was referred, at the Commissioner's initiative, to the Secretary of the Interior for guidance. Wishing to maximize the leasing potential of the Green River Formation, the

Commissioner invited the Secretary to deny the existence of any valid oil shale placer mining claim. The Secretary responded however that the law and the facts were too clear for that, and issued, as a general rule and regulation, *Instructions* that lands valuable for oil shale, such as those within the Mountain Boy and Harold Shoup Claims, had been open to private appropriation under the mining laws prior to the Mineral Leasing Act, and that properly initiated oil shale placer mining claims could proceed to issuance of patents from the United States. These *Instructions* were published at 47 L.D. 548 (May 10, 1920); they promptly received substantial publicity in the oil shale areas of Colorado and came to the attention of the Congress. The *Instructions* have remained in effect without interruption to the present, and have been consistently followed, except (so far) with respect to the Mountain Boy and Harold Shoup claims.

12. The *Instruction* resulted later in 1920 in the issuance of patents for the claims (the La Paz 1-14 claims) that had occasioned the *Instructions*, and altogether over the next forty years, in the issuance of patents for two thousand three hundred twenty six oil shale placer mining claims within the Green River Formation, covering an aggregate of 349,088 acres. Throughout this period, and continuing to the present, the Secretary of the Interior (including subordinate officials and agencies) has otherwise recognized and confirmed the valuable nature of oil shale deposits such as those within the Mountain Boy and Harold Shoup claims, by means including reservations to the United States of oil shale deposits (because of their value) in patents issued pursuant to the homestead laws. The Secretary of the Interior has defended the propriety of this course of conduct in litigation in this Court. *E.g.*, *Brennan* v. *Udall*, 251 F. Supp. 12 (1966), *affirmed*, 379 F.2d 803 (10th Cir.), *cert. denied*, 389 U.S. 975 (1967).

13. The Secretary of the Interior's rule, regulation, and practice of recognizing the mineral value of oil shale deposits such as those within the Mountain Boy and Harold Shoup claims, was extensively reexamined by Interior itself in the case of *Freeman* v. *Summers*, 52

L.D. 201 (1927), and by the Congress of the United States and by other parts of the Executive Branch in 1930 and 1931 (in a review of the *Instructions, Freeman* v. *Summers*, and Secretary of the Interior's campaign to invalidate oil shale claims for lack of complete and literal satisfaction of the "assessment work" prescriptions of the mining laws). Following these reexaminations, the Secretary of the Interior continued to recognize the value of oil shale, and the patentability of pre-Mineral Leasing Act claims, with the approval of the Congress and the Executive. In all legally relevant respects, the said 349,-088 acres are identical with the lands involved here, and if at any time between 1920 and the early 1960's the question of the patentability of these lands had been presented to the Secretary of the Interior, patents would have been issued.

14. Around 1960, subordinate Interior officials advocated, and in the early 1960's top echelon Interior officials decided, that no more oil shale claims be recognized as patentable or otherwise valid. The patenting of oil shale claims was immediately stopped, and favorable processing of pending patent applications was immediately reversed. The decisions that produced these dramatic reversals in Interior's long-standing rules and practices were made in proceedings that involved no advance notice to owners of unpatented oil shale claims, no opportunity for the owners to participate, no publication in the Federal Register of proposed (or final) rulemakings, and no other public indication of their course. These proceedings resulted in private internal decisions to oppose the patenting of any and all oil shale claims on the basis of various contentions as to fact and law. These included contentions that certain aged, and long since nullified, adverse administrative adjudications concerning lack of complete and literal performance of assessment work, had become revivified so as to invalidate oil shale claims, and, where such adverse administrative adjudications had not occurred, contentions, pressed as a test case in the contest proceedings below for which judicial relief is herein sought, that no oil shale claim was prior to 1920, had ever since been, or now was, valu-

able for minerals. In pursuance of these determinations, Interior officials in 1964 instituted Contest proceedings C-359 and C-360 against the Mountain Boy and Harold Shoup claims, for which patent applications had been filed in 1958 and 1960 respectively. These contests went to trial in 1967 before a Hearing Examiner, and on April 17, 1970, he rendered a decision that made extensive factual findings and that held that the said mining claims were entitled to go to patent under the Department's long-established rules, regulations and practices with respect to oil shale mining claims. Interior officials prosecuted an appeal from this decision, and on June 28, 1974, the Board of Land Appeals rendered a decision, a copy of which is attached hereto as Appendix A, on that appeal. The Board's decision, although accepting the Hearing Examiner's factual findings, disagreed on questions of law and overthrew Interior's rules, regulations, and practices concerning oil shale claims and declared the claims invalid.

15. The Board of Land Appeals was created within the Department of the Interior subsequent to the trial in 1967, and plaintiffs allege only error, but no other improper conduct, on the part of the members of the Board who signed the said decision. In creating the Board the Secretary of the Interior delegated to it his full authority to render decisions with respect to mining claims and patent applications for such claims, and the Board's said decision is administratively final. Plaintiffs have no other administrative recourse of right and have exhausted all possible appropriate or necessary administrative remedies.

16. The Board's decision is erroneous, arbitrary and capricious, not supported by substantial evidence on the record as a whole, violative of due process and equal protection constitutional guarantees, and otherwise improper, for reasons including the following:

(a) Oil shale deposits such as those within the Mountain Boy and Harold Shoup claims were in fact valuable for minerals at the time of their initiation, and have continued to be valuable for minerals to the present;

(b) There is no legal basis for terminating a validly initiated and perfected mining claim because of market fluctuations or other economic changes, except that where valuable minerals have been worked out and the land no longer contains valuable minerals, a mineral patent may not be obtained, but this exception does not apply in the present action;

(c) It is logically and historically fallacious to conclude, as the Board did, that the absence of sustained commercial domestic production of shale oil and related by-products shows that oil shale is not valuable. Why such production has not occurred was not put in issue by the pleadings and is not susceptible of reliable proof; a number of hypotheses have been advanced why our nation's valuable oil shale resources have not been developed, including other short term financial interests, Interior Department attacks upon oil shale claims, and an often unfavorable attitude within the federal government with respect to the stability of title to oil shale lands and with respect to commercial development of oil shale.

(d) It is erroneous to conclude, as the Board did, that the present value of a mineral deposit cannot be shown by reason of prospects of foreseeable future production at a profit. Indeed, since long development times are necessary to utilize a mineral resource such as oil shale, its present value necessarily depends upon such future prospects of profitability. At all relevant times, oil shale deposits such as those within the Mountain Boy and Harold Shoup claims have been presently valuable because of the future prospects of profitable production of shale oil and related products therefrom.

(e) In 1920 the Secretary of the Interior adopted, and thereafter until the instant proceedings he and his successors maintained, a rule and regulation that oil shale deposits such as those within the Mountain Boy and Harold Shoup claims were valuable and eligible for patent. Promulgation of such a rule and regulation was and is within the statutory authority of the Secretary of the Interior. The rule and regulation were reasonable. The rule and regulation were well publicized,

notorious, and thoroughly reviewed by other agencies and branches of the federal government. Plaintiffs and other owners of unpatented oil shale mining claims were entitled to rely, and did rely, upon the rule and regulation, and are entitled to have the rule and regulation applied to the Mountain Boy and Harold Shoup claims. The rule and regulation were repeatedly and consistently adhered to for at least forty years, and there do not exist compelling and overwhelming circumstances or developments which would legitimize the present efforts of Interior officials to overthrow and depart from the rule and regulation and to do so retroactively, to plaintiffs' detriment. The Secretary of the Interior has played a large role in formulating the law applicable to oil shale placer mining claims within the Green River Formation; that law now governs the Secretary of the Interior himself, just as it has for decades past bound all others.

17. Plaintiffs' oil shale claims are valid and are eligible for patent. The defendant has a duty to issue patents for such claims upon proper application therefor. Such applications have been filed and are presently pending. The defendant and his predecessors in office and their subordinates have thoroughly investigated the validity and patentability of plaintiffs' claims, and properly regard them as valid and patentable except with respect to the contention of lack of value of oil shale.

WHEREFORE, the plaintiffs pray the Court:

1) To reverse the June 28, 1974, decision of the Board of Land Appeals;

2) To require the defendant to process plaintiffs' pending patent applications expeditiously, without regard to the contention that oil shale has been and is lacking in value, and comprehensively, either upon the basis of the existing administrative record or, upon good cause shown, upon the basis of that record and one further procedurally proper administrative proceeding;

3) To grant such other and further relief as the Court deems reasonable, just and proper.

Respectfully submitted,

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Dated: August —, 1974

Answer. (Entered October 21, 1974):

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO

Civil Action No. 74-739

SHELL OIL COMPANY, ET AL., PLAINTIFFS

v.

ROGERS C. B. MORTON, DEFENDANT

ANSWER

Defendant answers the complaint as follows:

First Defense

The complaint fails to state a claim upon which relief can be granted.

Second Defense

1. Defendant admits the allegations in paragraph 1, with the exception of the stated grounds for the decision of the Interior Board of Land Appeals. Defendant affirmatively alleges that the principal holding of the Board was that the mining claims in question were not supported by the discovery of valuable mineral deposits within the limits of the claims either as of 1920 or as of the date of the administrative hearing.

2. Defendant admits the allegations in paragraph 2.

3. Defendant admits the allegations in paragraph 3.

4. Defendant admits the allegation in the third sentence of paragraph 4. The remaining allegations in that paragraph are conclusions of law which require no answer.

5. The allegation in paragraph 5 is a conclusion of law which requires no answer.

6. Defendant admits that each of the mining claims in question was purportedly located prior to February 25, 1920, upon vacant, unappropriated public domain but denies that any of the claims were perfected by a

discovery. The allegations in the second sentence of paragraph 6 are conclusions of law which require no answer. Defendant admits the allegations in the third sentence of paragraph 6, with the exception that defendant denies that the deposits in question are "high grade oil shale deposits." Defendant denies the allegations in the last sentence of paragraph 6.

7. Defendant admits that the lands in question were classified as of May 23, 1916, "as mineral lands, valuable as a source of petroleum and nitrogen." Defendant denies the allegations in the first sentence of paragraph 7 to the extent of any inconsistency with the foregoing. Defendant denies the allegation in the second sentence of paragraph 7 and affirmatively alleges that the classification was made on the inference that the lands contained oil shale deposits and that oil shale deposits might have some future, potential value as a source of petroleum and nitrogen. Defendant admits that the lands have remained classified "as mineral lands, valuable as a source of petroleum and nitrogen." Defendant denies the allegations in the last sentence of paragraph 7 to the extent of any inconsistency with the foregoing.

8. Defendant denies the allegations in paragraph 8.

9. Defendant admits the allegations in the fourth sentence of paragraph 9 but denies the remaining allegations in that paragraph.

10. The allegations in paragraph 10 are conclusions of law which require no answer.

11. Defendant admits the allegations in the first sentence of paragraph 11. Defendant affirmatively alleges that, in a memorandum of April 20, 1920, for the Secretary of the Interior, the Commissioner of the General Land Office sought instructions with respect to oil shale placer patent applications. Defendant further alleges that such letter constitutes the best evidence as to what the Commissioner did. Defendant admits the issuance, on May 10, 1920, of Instructions published at 47 L.D. 548 and affirmatively alleges that such Instructions constitute the best evidence as to what the Secretary did. Defendant admits the allegation in the first clause of the fourth sentence in paragraph 11 but is without knowledge

or information sufficient to form a belief as to the truth of the remaining allegations in that sentence. Defendant admits the allegation in the clause of the last sentence of paragraph 11 but denies the remaining allegations in that sentence.

12. Defendant admits the issuance of the patents described in the first sentence of paragraph 12 but denies that such patents resulted from the proper application of the 1920 Instructions. Defendant admits that deposits of oil shale have been reserved in patents under the homestead laws but denies that such reservations constituted recognition of the present value of oil shale required to establish a valid discovery under the mining laws. The allegation in the last sentence of paragraph 12 is a conclusion of law which requires no answer.

13. Defendant admits the allegations in the first sentence of paragraph 13 but denies that the decision in *Freeman* v. *Summers*, 52 L.D. 201 (1927), reflects a proper interpretation of the applicable law. Defendant admits that certain employees of the Department of the Interior continued to patent oil shale claims on the erroneous belief that *Freeman* v. *Summers* correctly stated the applicable law. Defendant denies the allegations in the second sentence of paragraph 13 to the extent of any inconsistency with the foregoing. The allegations in the last sentence of paragraph 13 are conclusions of law which require no answer.

14. Defendant admits the allegations in the second, sixth, seventh and eighth sentences of paragraph 14, with the exception of the first phrase of the sixth sentence which constitutes an opinion of plaintiffs not requiring an answer, and the last phrase of the seventh sentence which constitutes a legal interest by plaintiff not requiring an answer. Defendant affirmatively alleges that, around 1960, Interior Department officials recommended, and it was decided, that certain concepts reflected in *Freeman* v. *Summers* should be challenged and that the validity of oil shale claims should be contested in appropriate cases. Defendant denies the allegations in the first sentence of paragraph 14 to the extent of any inconsistency with the foregoing. Defend-

ant affirmatively alleges that, in appropriate cases, notice of administrative contests to adjudicate the validity of unpatented oil shale mining claims was given to the mining claimants, together with the right to an administrative hearing, and defendant denies the allegations in the third sentence of paragraph 14 to the extent of any inconsistency with the foregoing representation. Defendant admits that no rulemaking type of notice was given and that no rulemaking proceedings were conducted but denies that such were required. Defendant affirmatively alleges that the Secretary of the Interior issued a title clearance memorandum to the effect that all relevant issues should be considered in the determination of the validity of oil shale mining claims. Defendant denies the allegations in the fourth sentence of paragraph 14 to the extent of any inconsistency with the foregoing representation. The allegations in the fifth and ninth sentences of paragraph 14 are conclusions of law which require no answer.

15. Defendant admits the allegations in paragraph 15.

16. The allegations in paragraph 16 are conclusions of law which require no answer but which defendant, nevertheless, denies.

17. Defendant admits that applications for patent were filed. The remaining allegations in the first three sentences of paragraph 17 are conclusions of law which require no answer but which defendant, nevertheless, denies. Defendant denies the allegations in the last sentnc of paragraph 17.

Defendant denies every allegation of the complaint which is not expressly admitted.

WHEREFORE, defendant respectfully requests that the complaint be dismissed and that defendant be awarded his costs.

Respectfully submitted,

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Plaintiffs' Motion for Summary Judgment. Entered April 15, 1975:

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO

Civil Action No. 74-F-739

SHELL OIL COMPANY and D.A. SHALE, INC., PLAINTIFFS

v.

ROGERS C. B. MORTON
Secretary of the Interior, DEFENDANT

PLAINTIFFS' MOTION FOR
SUMMARY JUDGMENT

COME NOW plaintiffs Shell Oil Company and D. A. Shale, Inc., by and through their attorneys, and move this Court for an Order granting summary judgment of this action in favor of plaintiffs and against defendant herein.

This motion is based upon the following grounds:

1. This is an action for judicial review of a decision of the Interior Board of Land Appeals, Department of the Interior, entitled *United States* v. *Frank W. Winegar*, et al., 16 IBLA, dated June 28, 1974, which rejected plaintiffs' applications for patents on their six placer mining claims located for oil shale in the Green River Formation of Colorado and declared the claims invalid on the grounds that oil shale was not a valuable mineral under the mining laws when the claims were located in 1917 and 1918 or at the time of the enactment of the Mineral Leasing Act in 1920 or at the time of the administrative hearing in 1967. A copy of said decision is attached to the complaint filed in this action.

2. The administrative record shows that oil shale of the Green River Formation was a valuable mineral under the mining laws at all relevant times.

3. From 1916 to 1920 the defendant's predecessors in office and their subordinates formulated and applied in preliminary fashion, and from 1920 and into 1960 they publicly and consistently applied in formal and definitive fashion an eminently reasonable rule, well within their statutory authority, that oil shale of the Green River Formation was a valuable mineral and subject to location and patenting under the mining laws.

4. The Department of the Interior's rule with respect to the location and patenting of oil shale of the Green River Formation was thoroughly reviewed and ratified by the Congress.

5. The said rule was applied in many ways by the Department of the Interior in the course of its administration of the public land laws including the patenting from 1920 to 1960 of 2,326 oil shale claims geologically indistinguishable from the claims involved in this proceeding.

6. The Department of the Interior may not overthrow said rule retroactively to the detriment of plaintiffs.

7. Defendant is estopped from acting contrary to the said rule with respect to plaintiffs or their oil shale mining claims.

The Court ordered on January 27, 1975, and the parties have stipulated, that this action is appropriate for and will be heard and decided on cross motions for summary judgment, on the basis of the administrative record in the *Winegar* proceeding.

In support of this motion and in accordance with this Court's order of January 27, 1975, and the related stipulation of the parties, plaintiffs are filing herewith a brief including proposed conclusions of law, a separate compilation of Plaintiff's Proposed Findings of Fact, and a proposed order of judgment.

Respectfully submitted,

Defendant's Motion for Summary Judgment. Entered April 17, 1975:

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO

Civil Action No. 74-F-739

SHELL OIL COMPANY, ET AL., PLAINTIFFS

v.

ROGERS C. B. MORTON, DEFENDANT

DEFENDANT'S MOTION FOR SUMMARY JUDGMENT

Pursuant to Rule 56, Federal Rules of Civil Procedure, defendant moves for summary judgment on the grounds that there is no genuine isue as to any material fact and defendant is entitled to judgment as a matter of law.

This motion is based upon the complaint, defendant's answer thereto and the entire administrative record of the Department of the Interior in the contest proceeding entitled *United States* v. *Frank W. Winegar, et al.*, Colorado Contests No. 359, 360.

Respectfully submitted

SUPREME COURT OF THE UNITED STATES

No. 78-1815

CECIL D. ANDRUS, SECRETARY OF THE INTERIOR, PETITIONER

v.

SHELL OIL COMPANY, ET AL.

ORDER ALLOWING CERTIORARI. Filed October 1, 1979

The petition herein for a writ of certiorari to the United States Court of Appeals for the Tenth Circuit is granted.

☆ U. S. GOVERNMENT PRINTING OFFICE: 1979 304018 108

Supreme Court, U. S.
FILED
JUL 6 1979
MICHAEL RODAK, JR., CLERK

IN THE

Supreme Court of the United States

October Term 1978

No. 78-1815

CECIL D. ANDRUS, Secretary of the Interior,
Petitioner,

v.

SHELL OIL COMPANY and D. A. SHALE, INC.,
Respondents.

BRIEF IN OPPOSITION TO PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE TENTH CIRCUIT

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IN THE

Supreme Court of the United States

October Term 1978

No. 78-1815

CECIL D. ANDRUS, Secretary of the Interior,
Petitioner

v.

SHELL OIL COMPANY and D. A. SHALE, INC.,
Respondents

BRIEF IN OPPOSITION TO PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE TENTH CIRCUIT

Shell Oil Company and D. A. Shale, Inc., respectfully request that this Court deny the Petition for a writ of certiorari to review the judgment of the United States Court of Appeals for the Tenth Circuit. The decision of the Court of Appeals is clearly correct and consistent with the decisions of this Court, and moreover, it reflects special circumstances so that the ruling has little likelihood of general applicability. If, however, this Court is disposed to grant the Petition, review should not be confined to the single question tendered by the Petition, which will not be dispositive of this long-pending litigation, but should include review of the four separate grounds on which the District Court awarded summary judgment.

QUESTIONS PRESENTED

At issue in this litigation, commenced by the Department of the Interior in 1964, is whether the remarkably uniform oil shale deposits of the Green River Formation, principally in Colorado, constitute valuable mineral lands within the meaning of the Mining Law, 30 U.S.C. 22. As exemplified in the opinion of the District Court,[1] this issue has four aspects:

1. Whether as a matter of statutory construction Green River Formation oil shale deposits constituted valuable mineral lands as of the time of the location of the claims in suit (1917-1918) and as of the time of applications for patent for the claims (1958-1960).

2. Whether by virtue of having formulated in 1916, promulgated in 1920, and thereafter consistently applied until 1961 an administrative rule and practice that Green River Formation oil shale deposits constituted valuable mineral lands entitled to patent (but only if the other conditions for patent were met), under which 2,326 oil shale claims have been patented, the Department of the Interior may rescind that rule with retroactive effect so as to deny patent on the six claims in suit, the government having conceded that the claims in suit differ in no material way as to size and richness of the oil shale deposits from many claims heretofore patented.

3. Whether the Department of the Interior, having induced the expenditure of large sums in the development of commercial technologies for the production of oil from shale and in the initiation, purchase and

[1] The opinions below, set forth in the Appendices to the Petition for Certiorari, are cited herein by reference to those Appendix pages; the District Court's opinion appears at pp. 22a-59a.

development of oil shale mining claims by reiterated statements that the claims could be taken to patent and developed commercially, is now estopped to assert that the oil shale claims in suit have never been eligible for patent.

4. Whether Congress, in its enactment of the Mineral Leasing Act of 1920 with a savings clause as to previously located valid oil shale claims, in its extensive favorable review in 1930-31 of the Department's administration of the Mining Laws with respect to oil shale, and in its adoption in 1956 of legislation expressly designed to facilitate the patenting of oil shale claims, has confirmed the long-standing Department rule and practice so as to deprive the Department of the power by mere administrative fiat to overturn that rule and practice. This issue alone is tendered by the Petition, and in its statement of this single issue the Petition confines discussion almost entirely to the circumstances and effect of the 1930-31 Congressional review.

SUPPLEMENTAL STATEMENT

Because the Statement in the Petition addresses only the Congressional ratification issue, and that only in part, a supplemental statement is necessary to permit full evaluation of the relevant four issues stated above.

1. The six unpatented oil shale placer mining claims involved in this case were located in Garfield County, Colorado, in 1917 and 1918. The claims were then known to contain very substantial oil shale deposits of the Green River Formation capable of yielding large quantities of oil and oil by-products. The location of the claims occurred at a time when demand

for oil was rising rapidly and supply was decreasing. In reflection of these trends, which were expected to continue, the price of oil in the United States was rising rapidly, from an average of 64 cents per barrel in 1915 to more than $3.00 in 1920. The technology required to produce oil from oil shale had been demonstrated in a number of foreign countries, most prominently by a profitable oil shale industry in Scotland, where compared with the Green River Formation oil shale of Colorado the oil shale deposits were thinner and yielded less oil per ton of rock and were more difficult to mine. (*E.g.*, 4a-5a, 8a; 43a, 46a; 63a; 129a-135a; 160a-164a.) As shown in an economic study prepared by the Department of the Interior for the hearings below, an oil shale mine and refinery in the area of Respondents' mining claims would have operated with a small profit in the years 1915-1919[2], a conclusion which confirmed contemporary estimates.

2. These developments were accompanied by action by the Department of the Interior which showed from the outset the Department's appreciation of the value of the Green River Formation oil shale lands. As the District Court noted below (34a-46a), private expenditures in oil shale claim location and development in the pre-1920 period were very largely directly induced by the Department. On the basis of studies beginning in 1913 by the United States Geological Survey, the Wilson Administration in 1916 formally classfied large areas of the Green River Formation, including the area within the claims in suit, as valu-

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[2] (14a-15a; 97a-99a.) A similar study focused on 1966 showed a larger profit, and private and governmental studies in 1951 also showed profits. (*Ibid.*)

able mineral lands. The purpose of this classification was to prevent alienation of the oil shale deposits under the homestead laws, but at the same time the Administration decided to leave them open "to acquisition under the mineral land laws", by location and discovery which was known already to be underway. The Green River Formation lands were left available for appropriation under the mining laws precisely to serve as an inducement to private parties to develop an industry.[3] The Administration also invited Congress to include oil shale in the Mineral Leasing Act. *Hearings on H.R. 406 before the Senate Committee on Public Land*, 64th Cong., 1st Sess., pp. 301, 320-321 (1916).

Also in 1916, in further reflection of the acknowledged value of the Green River Formation oil shale deposits, Naval Oil Shale Reserves were established by Executive Order to assure the Navy a fuel supply. Aware that areas within the boundaries of the proposed Reserves were already the subject of oil shale mining claims, the Administration included within the Reserves a larger area than would otherwise have been set aside for the Navy. Because of concern that the withdrawal for the Naval Oil Shale Reserves was having a chilling effect upon private efforts to develop an industry, the Administration was careful to reassure the public that no further Executive Branch withdrawals were contemplated. (*See* 4a-4b; 32a;

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[3] The classification document explained "The lands have not been recommended for withdrawal because the oil shale industry is not yet developed in the United States, and as it is desired to give opportunity for the establishment of experimental plants it is believed the lands should remain open for the present to acquisition under the mineral-land laws . . . ." Exhibit G-31. The classification remains in effect. *Cf.* 12a-13a.

Hearings before the House Committee on Public Lands, "Oil Leasing Lands", 65th Cong., 2d Sess. (*"1918 Hearings"*) pp. 811-832, 904-913 (1918).

Oil shale researches and economic studies through the Bureau of Mines of the Department of the Interior led to conclusions that were highly publicized in the hope of stimulating development, that the time had already arrived when Green River Formation oil shales could be profitably developed. *See, e.g.*, 39a-47a. For example, in the 1917 Report of Secretary of the Interior Lane, it was stated (p. 73) that "It is believed that it is now commercially feasible to work selected deposits in competition with oil from oil wells."[4]

During the years 1916-1920, the Department of the Interior responded favorably to numerous inquiries from the Congress and members of the public whether oil shale mining claims would be patentable. (*See, e.g.*, 5a, 34a.) As a consequence, the years 1916-1920 witnessed much activity by private parties locating oil shale claims and expending efforts and funds to develop a commercial industry. As the Hearing Examiner's decision noted, "The evidence in this respect is massive." (145a.)

3. It was against this background that during the latter half of the decade before 1920 the Congress took up consideration of legislation to supplant claim

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[4] A number of Interior witnesses testified at the hearing as to a substantial body of official government statements prior to 1920 encouraging an interest in oil shale and clearly expected to induce such interest. As the Court of Appeals concluded, "The Department of the Interior by its publications and policies, strongly encouraged the location of claims on oil shale deposits in the pre-1920 period." (4a.)

appropriation of oil shale lands under the Mining Law with a scheme for government leasing. As early as 1916, senior officials of the Department of the Interior invited the Congress to consider including within the Mineral Leasing Bill then being debated the Green River Formation oil shale deposits classified as mineral land. (*E.g.*, 31a-32a.) At hearings in 1918, the Congress heard extensive testimony about the oil-yielding potential and development prospects of the Green River Formation and about the initiation and development of mining claims. Congress was further apprised of the preliminary views of the Department of the Interior that patents could be obtained for such mining claims under the Mining Law (*1918 Hearings, supra.*) In order to allay concerns expressed to Congress that the leasing bill might prejudice oil shale claims already located, the leasing bill as enacted contained a specific clause, drafted with the involvement of oil shale mining claims owners and high Interior Department officials, excepting from its operation prior valid mining claims. This clause became the "savings clause" of the Mineral Leasing Act that was enacted on February 25, 1920.[5]

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[5] Congress' intention that the savings clause applied to prior oil shale claims regarded as valid is thoroughly documented. *See, e.g.*, 5a, 32a-36a; *1918 Hearings, supra; Hearings before the House Committee on Mines and Mining on H.J. Res. 150, "Joint Resolution To Suspend the Requirements of Annual Assessment Work on Mining Claims During the Year 1919"*, 66th Cong., 1st Sess., pp. 16-18 (1919); *Consolidated Hearings before the House Committee on Public Lands, "Applications for Patent on Oil-Shale Lands"*, 71st Cong. 2d and 3rd Sessions (*"1930-1931 House Hearings"*), pp. 36-37, 99, 121-123, 170, 181 (1930-1931); *Hearings before a Subcommittee of the Senate Committee on Public Lands and Surveys Pursuant to S. Res. 241, "Administration and Use of Public Lands"*, 78th Cong., 1st Sess., pp. 3783-84, 3798-99, 3804-05 (Part 13, Nov. 15 & 16, 1943).

4. The preliminary favorable views of the Department as to the patentability of oil shale claims were formalized in published "*Instructions, Act of February 25, 1920—Oil Shale Placer Claims*", 47 L.D. 548 (May 10, 1920), when the first application for patent for oil shale mining claims reached the Department shortly after passage of the Leasing Act. Inasmuch as the ruling would be a precedent in other cases, and formal determination of the patentability of oil shale claims located prior to the effective date of the Mineral Leasing Act would diminish the scope of leasing, the application provoked a plenary review at the Secretarial echelon in the Department. The conclusion expressed in the "*Instructions*", that oil shale lands were "subject to valid location and appropriate under the placer mining laws" reflected a conclusion favorable to the patentability of the 14 claims before the Department, and in consequence of the decision the first patent for Green River Formation oil shale claims was issued.[6] Save as patenting was suspended during the investigations conducted by both House of Congress in 1930-1931, pending the outcome of legislative review of Department practice, recognition of the value of the oil shale deposits by the Department was reflected continuously over the succeeding 40 years, during which the Department of the Interior issued patents to 2,326 oil shale claims in the Green River Formation. (*E.g.*, 8a-11a, 34a-36a, 167a-170a.)

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[6] The 14 claims in question, the La Paz group, lie in a very similar position to the six claims in suit. An expert geologic witness for the Department at the hearing below conceded that the oil shale strata in the claims at suit were essentially lateral extensions of the strata contained in the La Paz claims. Transcript of hearing, pp. 508-509.

5. The Department's recognition of oil shale deposits as "valuable mineral lands" was challenged in *Freeman* v. *Summers* contest proceedings during the period 1923-1927 between homestead and mining claimants. The argument against the validity of the mining claims was pressed in part upon the basis that recent discoveries of conventional petroleum had temporarily depressed petroleum prices and deferred the day when commercial production of oil from shale could be expected. The Secretary of the Interior personally presided at a rulemaking hearing in the course of the proceedings, at which officials of the Department of the Interior, members of Congress, and representatives of oil shale mining claim owners participated. The final ruling of the Secretary, adhering to the view that oil shale claims continued to be patentable, was published in the official Interior Department reports (52 L.D. 201) and also in the Annual Report (pp. 29-30) of the Secretary for 1927.[7]

6. The Department's recognition of the patentability of oil shale claims was not a product of indifference to the subject. On the contrary, throughout the 1920's and until 1935, the Department conducted a vast campaign to review all oil shale claims and to institute contest proceedings against any claim found to be subject to challenge on any ground. A principal issue in this campaign was the question of assessment work, which reached this Court twice, in *Wilbur* v. *Krushnic,* 280 U.S. 306 (1930), and in *Ickes* v. *Virginia-Colorado Development Corp.,* 295 U.S. 639 (1935).

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[7] 7a, 35a; "*Hearings on S. Res. 379 Before the Senate Committee on Public Lands and Surveys*", 71st Cong., 3rd Sess ("*1931 Senate Hearings*"), pp. 1, 2, 34, 51-52, 62-63, 83, 98, 175, 211 (1931).

Virtually all unpatented oil shale claims were declared invalid on assessment work grounds.[8]

7. At the close of the 1920's, as the Petition notes, the Department's practices with respect to patenting oil shale claims came under intensive public scrutiny as the result of a series of sensational articles authored by a disgruntled Chief of the Field Service of the Land Office in Denver, Ralph Kelley. The Department's decision in *Freeman* v. *Summers* was the focus of his attack, not because he thought that oil shale was not valuable, but because he contended that the mining laws had not otherwise been complied with. Indeed, the central thesis of his attacks was that oil shale was enormously valuable and should be conserved for the benefit of the general public. His attacks led to well-publicized investigations of the Department's practices with respect to oil shale by Assistant Attorney General Seth Richardson and by both houses of Congress. The central focus of all of these investigations was whether oil shale was being appropriately treated as a valuable mineral resource in the Department's administration of the public land laws, more particularly phrased as whether the discovery requirements of the mining laws had been satisified. At the outset of these investigations, the De-

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[8] *E.g., 1930-1931 House Hearings, supra*, pp. 6-7, 10, 27-30, 555-63, 95, 147, 155; Annual Report of the Secretary of the Interior for 1931 (p. 32). On June 16, 1939, Secretary Ickes wrote to the Chairman of the House Committee on the Public Lands, in support of H.R. 6560 which would have required performance of annual work on oil shale claims, that prior to the 1935 ruling of this Court in *Virginia-Colorado* the Department had declared more than 30,000 oil shale claims, embracing more than 4,000,000 acres, invalid for nonperformance of annual work. Ex. C-777.

partment suspended the issuance of patents for oil shale claims, and requested legislative clarification or guidance on discovery and other aspects of oil shale claims. (9a-11a; 35a-36a; *1931 Senate Hearings, supra; 1930-1931 House Hearings, supra.*)

Assistant Attorney General Seth Richardson concluded that the Government's interests in oil shale lands were being "vigorously and honestly administered by Secretary Wilbur and his Department." The Attorney General's covering letter to Secretary Wilbur for the report stated that the decision in *Freeman* v. *Summers*

> "seems eminently reasonable, but at most it was a matter of judgment on a debatable point .... there is more evidence to support the conclusion that you and your department have been exceedingly strict and exacting in resisting claims for patents than that you have been too liberal."[9]

The Senate investigation was headed by Senator Thomas Walsh, the hero of Teapot Dome. The Senate Committee reviewed extensive Interior Department files and heard testimony from the officials responsible for the issuance of oil shale patents and the decision in *Freeman* v. *Summers* and from Ralph Kelley. (*1931 Senate Hearings, supra.*)

The Senate investigation concluded with a letter from Senator Nye, the Chairman of the Senate Public Lands Committee, to the Secretary of the Interior

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[9] Exhs. C-321, pp. 165-167; C-409, pp. 7-8, in the administrative record. *Cf.* 5a: "The record shows that there was a careful examination of patent applications for compliance with the mining laws and to determine whether substantial oil reserves were present."

stating that there was no reason why the prior approach to the processing of oil shale patent applications should not be resumed. (11a.) Similarly, the House Committee investigation resulted in a Committee report recommending various changes in the mining laws with respect to oil shale mining claims, but not recommending any change with respect to the Department's practices concerning discovery or value requirements. (35a-36a.) The Department of the Interior thereafter resumed processing oil shale patent applications, rejecting claims found not in compliance with the mining laws and patenting others.

8. Toward the end of World War II it again became apparent that domestically produced supplies of conventional crude oil were becoming inadequate and that if undue dependence upon foreign imports was to be avoided, alternate energy sources such as oil shale could be developed. Responding to these developments, advocated by Secretary of the Interior Harold Ickes, Congress passed the Synthetic Fuels Act of 1944 which called for demonstration projects for the mining of oil shale and the refining of shale oil. (94a.) The patenting of oil shale claims, interrupted by the war, continued thereafter. Economic studies conducted around 1950 by the Bureau of Mines indicated that oil shale could then be profitably developed. Concurrent analyses by the National Petroleum Council, conducted at the request of the Secretary of the Interior, also showed that a profit of approximately 11% per year could then have been obtained from oil shale development. (95a-97a.)

9. Since the early 1920's, it had been the practice of the Department to refuse to issue patent to an oil shale claimant for land covered by a surface home-

stead patent unless the surface interest was first reconveyed to the United States. This circumstance had frustrated the patenting of a number of oil shale claims. With specific reference to this situation, Representative Aspinall from western Colorado introduced remedial legislation in 1956 to authorized issuance of patent for the mineral interest alone. With the support of the Department of the Interior, which advised Congress of the continuing patenting of oil shale claims, the legislation was enacted.[10]

10. Five years later, a new Secretary of the Interior and his Solicitor decided, without notice or opportunity to comment from any affected oil shale claim owner, that no further oil shale claims would be patented, and that among other objections the Department would assert that no oil shale claim had ever satisfied the value aspects of the mineral land laws. As the Court of Appeals observed,

> "No reason is given for the complete departure from the previous holdings. It is apparent that no changes in circumstances relative to oil shale and its development have come about. It is purely a change in departmental policy which came about by a change in the philosophy of the personnel." (16a; see also 14a, 63-64a; 130a-135a.)

11. Despite the Department's abrupt termination of patenting in 1961, it has otherwise continued to recognize the value of oil shale.[11] For example, it has

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[10] 12a-14a, 36a; cf. 52a. The legislative history, excerpted in Appendix A to this brief, clearly shows that Congress intended the patenting of pre-1920 oil shale claims to continue.

[11] The climate of the oil shale region is arid, vegetation is sparse, and the location remote from population centers. The lands have scant value for any purpose other than oil shale development. *See, e.g.*, 7a.

maintained in effect the 1916 classification of oil shale lands as valuable mineral lands. It has embarked on a prototype oil shale leasing program that has produced hundreds of millions of dollars in lease bids. (197a, n. 54.) It has steadfastly resisted efforts of the State of Utah to select oil shale land in lieu of school lands provisionally granted but not in fact available to the State, arguing in this Court that in consequence of the selections

> "The financial loss to the United States is very substantial . . . . If . . . the most valuable mineral . . . can be selected, the total predictable disparity must amount to several hundreds of millions of dollars."[12]

REASONS WHY THE PETITION FOR THE WRIT SHOULD BE DENIED

1. The decision of the Court of Appeals correctly held that Congressional action had incorporated into the Mining Law as applied to Green River Formation oil shale claims a determination as to value which it was beyond the power of the Department through administrative action thereafter to rescind with retroactive effect as to the six claims in suit. This is not only a case where Congress has specifically considered and approved a long-established and consistent administrative practice, although that is clearly true. It is also a case where the administrative practice had itself been anticipated by Congress and reflected a

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[12] Petition for Certiorari, *Andrus* v. *State of Utah*, No. 78-1522, pp. 10-11. Utah of course seeks the selected oil shale lands precisely because it agrees they are very valuable. Nonetheless, the State filed a brief amicus below in support of the Department, concerned that pre-1920 oil shale claims within the selected lands might be patented to private parties.

Congressional understanding, in the enactment of the Mineral Leasing Act of 1920, that the oil shale deposits of the Green River Formation that had been classified as valuable mineral lands in 1916 were indeed valuable and should be treated as such in administration of the public land laws. Congress understood that these deposits had very substantial values because of their capacity to provide large quantities of oil in the future; indeed, oil shale was too valuable to leave under the mining laws and was set aside, valid claims excepted, for leasing. Congress was also aware that the Department of the Interior had made a number of statements to Congressmen and to private individuals indicating that oil shale lands could be taken to patent under the placer mining laws.[13] As the Court of Appeals concluded, Congressional consideration of oil shale has constituted an "affirmative adoption of the very basic application of the mining laws to make it part of the statutory method of development of the oil shale reserves." (18a.) It is not obvious how one can reconcile Congress' plain understanding that pre-Leasing Act oil shale claims could be taken to patent, with the position now asserted by the Department that no oil shale deposits have ever been valuable or patentable. The enactment by Congress of the Mineral Leasing Act of 1920 and the almost contemporaneous publication of the Department's wholly consistent "*Instructions*", 47 L.D. 548 (May 10, 1920), show that from the very outset a recognition of oil shale deposits as constituting valuable mineral lands was an explicit central core in the administration of the Mining Law and the Mineral Leasing Act's savings clause with respect to oil shale.

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[13] *E.g.*, 5a, 34a; authorities cited p.7, n.5 *supra*.

The publicized inquiry in 1930-31 by Congress into the Department's administration of the law as to oil shale thus confirmed not only an administrative practice but the original Congressional intention. In that inquiry, because of Kelley's focus on the *Freeman* v. *Summers* decision, the very issue which the Department now seeks to relitigate was passed on by the investigators. Congress was specifically invited by Secretary Wilbur to consider whether the "question of discovery . . . will impress you as requiring legislative definition." (*1930-1931 House Hearings, supra*, p. 181.) The House investigation concluded with legislative proposals that contained no recommendation for change with respect to discovery. (35a-36a.) The charge for the Senate investigation was set forth in Senate Resolution 379, which had been proposed by Senator Walsh, and required an investigation of the

> "practices, rulings and actions of the Department . . . in relation to the preservation or disposition of such [oil shale] lands, or of applications for patent . . . and to make such recommendations as to it may seem appropriate touching needed legislation or other Governmental action for the recovery of any such lands . . . or for a review of any final award by the Secretary of the Interior of any such lands." (*1931 Senate Hearings*, pp. 1-2.)

Upon conclusion of the Senate hearings, Senator Nye, Chairman of the Committee, wrote to Secretary Wilbur that

> "Responding now to your letter of April 10, I have conferred with Senator Walsh and beg to advise you that there is no reason why your Department should not proceed to final disposition of the pending applications to oil shale lands in conformity to the law." (11a.)

The Department of the Interior, which had explained at length why it believed its practices were in conformity to the law but which had suspended issuance of oil shale patents pending Congressional investigations, promptly resumed processing of patent applications, and a large number of additional claims were patented over the next thirty years. As the courts below held, this is a clear case of Congressional consideration and approval of a well-established administrative application of a statute, with the effect of precluding subsequent contrary administrative interpretations. *E.g., Corn Products Refining Co.* v. *Commissioner,* 350 U.S. 46, 52-53 (1955); *Norwegian Nitrogen Products Co.* v. *United States,* 288 U.S. 294, 311-315 (1933).

Further compelling evidence of Congressional approval of the patentability of oil shale claims appears in the 1956 amendment of the mining laws enacted to facilitate the patenting of oil shale claims. The supporters of this legislation, in Congress and the Interior Department, pointed out that it would apply to pre-1920 oil shale claims only where discovery requirements had been satisfied. (*See* App. A hereto.) What the discovery requirements were was not the subject of extended consideration, undoubtedly because both the Congress and the Department regarded that as long since firmly settled. It is impossible, however, to reconcile Congress' action in 1956 with the view now endorsed by the Secretary that no oil shale claim has ever been patentable and that to regard an oil shale claim as patentable is "clearly contrary to the mining law". (Pet. p. 10.)

The Petition cites *TVA* v. *Hill,* 437 U.S. 153 (1978), and *SEC* v. *Sloan,* 436 U.S. 103 (1978), but these cases involve quite different situations in which this Court

concluded that it should not defy plain statutory language on the basis of subsequent evidence of approval by some within the Congress of a contrary interpretation of the statute.[14] In short, the decision below, grounded on affirmative Congressional approval of administrative practice consistently maintained for more than forty years and applied in thousands of applications of the public land laws, presents no federal question not already decided by this Court.

2. The decision below has limited precedential significance. Taken as a ruling on the question of Congressional ratification, the decision depends upon facts peculiar to the intensive scrutiny which the Department's administration of oil shale has received from Congress. Taken as a ruling having a bearing on the possibility that substantial acreage of oil shale claims will be patented, the Petition misconceives the facts. Far from the 5 million acres which the Petition suggests will go out the window if the decision below is permitted to stand, the acreage which will be patented as a consequence is much nearer the 960 acres embraced within the claims in suit. This is so because virtually all oil shale mining claims were declared invalid in the 1920's and 1930's for non-performance of assessment work[15] and for many other defects then

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[14] In another oil shale case, however, the Solicitor General has recently argued with respect to an administrative interpretation of the Taylor Grazing Act that "Congress, having 'revisited the Act . . . left the practice untouched' indeed expressly endorsed it." *Andrus* v. *State of Utah*, No. 78-1522, Petition for Certiorari, p. 20. That petition also argues that a January 1974 letter to the Secretary from Senators Jackson and Metcalf constituted Congressional approval of the position the Department had taken in its dispute with the State of Utah over its "in lieu" school selections. (pp. 23-24.)

[15] See p.10, n.8, *supra*. *Hickel* v. *Oil Shale Corp.*, 400 U.S. 48, 57 (1970), held that Interior had had authority to invalidate

perceived.[16]. Before any of those claims could be patented, the owners would have to overcome those prior cancellations and any other defects that the Department might presently assert. If those objections are meritorious, only a handful at most of further oil shale claims would be patented.

Respondents do not, of course, deny that their six claims are valuable, and thus there is some proprietary interest at stake. But in terms of the overall interest of this nation and the enormous extent of the Green River Formation itself, that proprietary interest is a very small one. Furthermore, it is not apparent why it would be appropriate to advance the interest of the nation in retaining ownership of oil shale lands because of their value, by contending that they are not valuable.

3. The single issue tendered by the Petition will not be decisive of this long-pending litigation. The District Court, on cross-motions for summary judgment, gave judgment for the Respondents on four grounds, of which the question of Congressional ratification is but one. Thus, if the Petition were granted confined to the single question presented by it, a reversal of the decision below would be followed by a remand requiring further proceedings in a litigation which has already occupied 15 years. If the possibility that oil shale mining claims might go to patent is to

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claims where the work requirements had not been substantially satisfied.

[16] The 5 million acre figure is difficult to reconcile with the fact that only 349,000 acres were patented during the period 1920-1960. Moreover, of 768 oil shale claims patented between the 1935 *Virginia-Colorado* ruling and 1960, only 261 had not been declared invalid for nonperformance of annual work. *See Oil Shale Corp.* v. *Morton*, 370 F. Supp. 108, 118 (D. Colo. 1973).

be regarded as warranting issuance of the requested writ—and no other substantial ground for such action is suggested by the Petition—review in this Court should extend to the three alternative grounds for decision in their favor which the Respondents have advanced in the lower courts. Precisely the same amount of oil shale is at stake, and much more significant legal questions are involved.

a. The first such issue is whether, quite apart from Congressional intention and ratification, the oil shale deposits within the six claims at issue are valuable mineral deposits within the meaning of the mining laws, *i.e.*, whether there were reasonable prospects for developing a paying mine, including prospects of marketing products at a profit. Although the evidence bearing on this is very extensive, Respondents' position may be simply stated. It is uncontroverted that at the time the claims were located, the supply of oil was declining, the demand was increasing rapidly, the price was increasing even more rapidly, the basic technology to produce oil from oil shale was in existence, and projected production costs were significantly less than selling costs. (*E.g.*, 4a-5a; 41a-48a.) Moreover, the record contains contemporaneous cost studies by private parties, general pronouncements of economic feasibility by well-informed and highly placed government officials, and a detailed retrospective analysis of the economics of producing oil from oil shale in the years 1915-1920 prepared for this litigation by expert witnesses retained by Interior, all of which show that positive returns could have been expected. The record also contains cost studies around 1950 and 1966, on the eve of trial, that likewise show that operations would be profitable. (*E.g.*, 14a-15a; 38a, 46a, 97a-99a.)

Further evidence that oil shale is valuable appears from the conduct of other interested parties, including the Department of the Interior, which classified the lands as valuable mineral lands in 1916, urged inclusion of them within the Mineral Leasing Act of 1920 precisely to realize their value, and encouraged governmental and private research and development activities. The Department is presently engaged in a prototype oil shale leasing program that has produced many millions of dollars of revenue, and has for fifteen years been vigorously opposing efforts of the State of Utah to select oil shale lands in lieu of other mineral school lands on the ground that the selected oil shale lands provide the State a "highly profitable trade . . . an unconscionable" advantage. (*See* Petition for Certiorari, *Andrus* v. *State of Utah*, No. 78-1522, pp. 10, 21.)

Interior's response to all this is basically that oil shale was not profitable enough to have induced investment needed to establish a commercial industry. This is an argument that not only must there be reasonable prospects for developing a paying mine, the paying mine itself must appear. That view is in conflict with the test specified early in *Castle* v. *Womble*, 19 L.D. 455, 457 (1894), and endorsed by the courts, *Chrisman* v. *Miller*, 197 U.S. 313, 322 (1905); *United States* v. *Coleman*, 390 U.S. 599, 602 (1968).

b. The second such issue arises from the well-established doctrine that prohibits the retroactive reversal of a long maintained administrative rule or practice absent compelling reason, which is wholly absent (16a.). Interior's rule that oil shale was valuable was very carefully formulated over the years 1916-1920, and was officially promulgated in the 1920 *In-*

structions. It was thereafter applied for the next forty years in the determination that 2,326 oil shale claims had satisfied the discovery requirements of the mining laws. It was also applied in numerous administrative adjudications where mining claims had not been made the subject of patent applications. (E.g., 167a-170a.) The same rule was also consistently applied to deny homesteaders rights to oil shale.[17]

The impropriety of such a reversal, absent compelling reason, is demonstrated by numerous authorities. *E.g., Logan* v. *Davis,* 233 U.S. 613, 626-27 (1914); *Brimstone Railroad and Canal Co.* v. *United States,* 276 U.S. 104, 122 (1928); *United States* v. *Midwest Oil Co.,* 236 U.S. 459, 474, 481 (1915); *United States* v. *Leslie Salt Co.,* 350 U.S. 383, 396-97 (1956); *Saxbe* v. *Bustos,* 419 U.S. 65, 74 (1974). There is no compelling reason here. To the contrary, the Department is clearly motivated by recognition that oil shale is indeed valuable.

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[17] The Act of July 17, 1914, an exception to the usual pattern which prohibited homestead entry on mineral land, authorized the issuance of homestead patents for land containing valuable deposits of enumerated minerals (among them "oil"), provided that there was a reservation to the United States "of the deposits on account of which the lands were withdrawn or classified or reported as valuable . . ." 38 Stat. 509, 30 U.S.C. 121. Since 1916 the Department has consistently construed "oil" to include oil shale and has issued homestead patents under the 1914 Act for lands within the Green River Formation oil shale deposits only with a reservation of the oil shale to the United States. *See Brennan* v. *Udall,* 251 F.Supp. 12 (D. Colo. 1966), *aff'd.,* 379 F.2d 803 (10th Cir.), *cert. denied,* 389 U.S. 975 (1967). Inasmuch as the 1914 Act authorizes a reservation of oil shale only where the oil shale deposits were "valuable", the Department's position in the present litigation is at odds with the basis upon which 200,000 acres of oil shale deposits were reserved to the United States in Colorado and Utah.

c. The third such issue is whether the Department may now in fairness and equity be heard to assert that the oil shale of the Green River Formation has never been valuable or patentable. There is extensive evidence of conduct and public pronouncements by many Interior Department officials during the years 1916-1920, well within their statutory authority, designed to encourage private activity in locating and maintaining oil shale mining claims and in efforts to develop a commercial industry. (4a-5a, 42a-43a.) In addition, the Department of the Interior publicly and prominently recognized the patentability of oil shale claims for the next forty years, and further encouraged private efforts to develop a commercial industry. During that period, Respondents and many other persons made significant expenditures in efforts to acquire, maintain, and patent oil shale mining claims, and many persons in addition to Respondents have made similar expenditures for unpatented claims and for technological research and development. (45a-47a, 130a-135a, 145a-160a.) These circumstances, amply documented in the extensive administrative record (40a-41a), warrant a holding that the Department of the Interior is estopped to contend that no oil shale has ever been valuable and no oil shale claim has ever been patentable.

Over the past fifteen years or so, the lower courts have increasingly concluded that circumstances were appropriate for application of this doctrine against a government agency. *E.g., United States* v. *Wharton,* 514 F.2d 406, 412-413 (9th Cir. 1975); *Fox* v. *Morton* 505 F.2d 254, 256 (9th Cir. 1974); *Brandt* v. *Hickel,* 427 F.2d 53, 56-57 (9th Cir. 1970); *United States* v. *Georgia-Pacific Co.,* 421 F.2d 92 (9th Cir. 1970); *Chapman* v. *El Paso Natural Gas Co.,* 204 F.2d 46, 53-54

(D.C. Cir. 1953); Davis, *Administrative Law of the Seventies*, §17.01 (1976). Divergent approaches and differing qualifications are being taken with respect to what many years ago was sometimes regarded as a blanket government immunity from estoppel. This Court has not to our knowledge issued a ruling in this area during the period of change. The District Court's ruling in Respondents' favor on the estoppel issue (which the Court of Appeals did not reach) demonstrates convincingly that on the facts of this case the Department was properly held to be estopped.

CONCLUSION

For the reasons stated, the Petition should be denied. If, however, the Petition be granted, the grant should include the issues discussed in paragraph 3, pages 19–24 above.

Respectfully submitted,

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APPENDIX A

LEGISLATIVE HISTORY OF ACT OF JULY 20, 1956, 70 Stat. 592, 30 U.S.C. Section 122

1. H. R. 6501, Public Law 743:

An Act to amend the Act of July 17, 1914, to permit the disposal of certain reserve mineral deposits under the mining laws of the United States.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That:

The first sentence of section 2 of the Act entitled 'An Act to provide for agricultural entry of lands withdrawn, classified, or reported as containing phosphate, nitrate, potash, oil, gas, or asphaltic minerals', approved July 17, 1914 (38 Stat. 509; 30 U.S.C. 122), is hereby amended by striking out 'such deposits to be subject to disposal by the United States only as shall hereafter expressly be directed by law' and inserting in lieu thereof, 'such deposits to be subject to disposal by the United States only as shall be hereafter expressly directed by law: *Provided, however,* That all mineral deposits heretofore or hereafter reserved to the United States under this Act which are subject, at the time of application for patent, to valid and subsisting rights acquired by discovery and location under the mining laws of the United States made prior to the date of the Mineral Leasing Act of February 25, 1920 (41 Stat. 437), shall hereafter be subject to disposal to the holders of those valid and subsisting rights by patent under the mining laws of the United States in force at the time of such disposal'.

Approved July 20, 1956 (1956 U.S.C.C.A., p. 683)

2. Excerpts from Transcript of April 23, 1956, Hearings on H. R. 6501 Before the Subcommittee on Mines and

Mining of the House Committee on Interior and Insular Affairs:[1]

Representative Wayne N. Aspinall, of Colorado, who had introduced H. R. 6501:

> [T]his bill would amend that Act [Act of July 17, 1914] to allow patent to be granted under the mining laws so long as the claim involved was valid prior to the passage of the Act of 1920 and providing that their validity is maintained. This bill would not bestow any right on claims which have, or which will, lapse. . . . (pp. 2,3)
>
> As it now stands, if a mining claim exists on a leasable mineral under land upon which a non-mineral surface right has been granted under the Act of July 17, 1914, the only way this valid right can be taken to patent is for the mining claimant to obtain and reconvey to the government the surface title. After this, the mining claim can be granted and patented and the surface right can be reestablished. Thus, if the surface owner refuses to cooperate in this process, the mining claimant is left with a valid right—but a right foreshortened by his inability to obtain patent. (p. 3)
>
> * * * *
>
> In my own area, this would affect mining claims for oil shale, a mineral or oil bearing rock reserved under the Leasing laws. (p. 4)
>
> * * * *
>
> This matter first came to my attention in a case where there exists an isolated tract of land surrounded on all sides by patented shale lands or claims upon which

[1] Since the transcripts have not been edited, reproduction of them cannot be made, without authorization from the House of Representatives. The transcripts can however be inspected, and copied by hand; that was done in preparing these excerpts.

patent is about to issue. This isolated tract is covered by both valid mining claims established under the mining laws and by surface rights granted under the Act of July 17, 1914 (38 Stat. 509; 30 U.S.C., secs. 121-123). It is a sort of 'no man's land'. The surrounding land was also covered by surface rights under the above act, but the mining claimants were able to obtain the cooperation of the surface owner and thereby obtain patent to their mining claims. As it now stands, these claims have little value for mining due to their uncertain status relative to surrounding lands. This legislation would seem to fill out the intention of previous law by allowing patent on this land just as it is now allowed on withdrawn land where agriculture entry has not resulted in a surface patent. (pp. 4,5)

* * * *

The law of 1914 which provides for the reservation of minerals and patents to be issued at that date did not make it possible to gain a patent on mineral claims which were validly entered into between 1914 and 1920. In my district there are a few cases—and we do not know how many but there are a few of them—where there is a valid existing mineral claim to oil shale where there was also a patent on the surface rights of the same land. In one particular case the owner of the surface rights through a patent issued by the government has refused to reconvey any surface rights to the government so that the government then could issue a new patent including the minerals in the area and thereby permit the new patentee to give a deed to the owner of the surface lands. (p. 7)

By so refusing, even though he was offered a good price for his cooperation, he has by his action prohibited the owner of the minerals to secure a patent which

was intended should be the case when the law was passed. In other words, the 1914 law did not have as a part of its intention the denying to a person who did establish a valid mining claim the right to proceed to patent. (p. 7)

Mr. Lewis E. Hoffman, Minerals Staff Officer, Department of the Interior:

I might say, statistically, I have the figures here:

From 1946 to 1955 inclusive, we patented 67 oil shale claims [sic-patents] mostly in Colorado, amounting to 84,602-plus acres; three oil and gas claims amounting to 480 acres, and one sodium claim amounting to 1760 acres. The sodium claim was in California. The oil shale patents were in Colorado and one in Utah. There were several also in California, which are the only three states really affected by minerals leasing. (p. 13)

. . . I hope the committee passes the bill or reports favorably on it.

3. Excerpts from Transcript of May 1, 1956, Hearings on H. R. 6501 Before the House Committee on Interior and Insular Affairs (testimony by Representative Aspinall):

* * * this does not have to do with any other minerals except the leasable minerals to which no one can get a patent since 1920, but these leasable minerals were patentable up until 1920, and this refers only to them. As far as I know, there are only just a few cases that are involved, and most of those cases are in the oil shale lands of eastern Utah and western Colorado. That is all this bill refers to. (pp. 3,4)

4. Excerpts from Senate Report No. 2524, July 11, 1956:[2]

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[2] The House Report, No. 2198, was similar.

The Committee on Interior and Insular Affairs, to whom was referred the bill (H.R. 6501) . . . having considered the same, report favorably thereon and recommend that the bill do pass.

OBJECTIVES OF H.R. 6501

If enacted, H.R. 6501 would amend a 1914 Act of Congress so as to permit holders of valid and subsisting rights to certain mineral deposits acquired by discovery and location made under the mining laws of the United States prior to the date of February 25, 1920, to perfect the titles thereto by obtaining patent to the mineral estate only. This would obviate the present requirement, impossible to meet in some cases, that holders of such claims, in order to obtain patents thereto, must first obtain the outstanding interest of the surface owner and thereafter reconvey the surface estate to the United States; a patent to the mining claim, including both mineral and surface estates, is then issued to the mining claimant. . . .

* * * *

By the act of July 17, 1914 (38 Stat. 509; 30 U.S.C., secs. 121-123), lands withdrawn, classified, or reported to be valuable for phosphate, nitrate, potash, oil, gas, or asphaltic minerals, which had been open to mineral entry only, were also opened to agricultural entry with the mineral deposits therein reserved to the United States. The mineral deposits in these lands continued to be open to discovery and location under the mining laws of the United States, including the right to obtain patents thereto, until the enactment of the Mineral Leasing Act of February 25, 1920 (30 U.S.C., sec. 181 et seq.). Since then, these mineral deposits have been subject to development only under leases issued by the United States.

* * * *

Under the Department of the Interior decision in the case of James W. Bell (52 I.D. 197 (August 1927)) the owner of a valid mining claim located before February 25, 1920, on lands covered by the 1914 act, in order to obtain a patent to the minerals, is required to acquire the outstanding interest of the surface owner and thereafter to execute a deed of reconveyance to the United States; subsequently, a mineral patent to the land, including both the surface and minerals, is issued to the mining claimant. From 1946 to 1955, inclusive, 71 mining claims, including 67 oil shale claims, were issued under this procedure. The Committee is informed that in a few cases mining claimants have been unable to obtain the cooperation of the owners of the surface estate and have been prevented thereby from obtaining patent to the mineral estate.

If enacted, H.R. 6501 would permit a qualifying mining claimant to be issued a patent to the mineral estate without requiring a reconveyance of or otherwise disturbing the surface estate.

TWO BILLS CONSIDERED

When the committee considered H.R. 6501 it also had before it S.2115. These two measures, being identical, were introduced in the respective bodies of Congress. The Department of Interior in reporting on H.R. 6501 and S.2115 recommended that two amendments be adopted and these amendments were adopted by the House prior to passage of H.R. 6501 by that body and transmission of the bill to the Senate.

DEPARTMENTAL REPORT

Department of the Interior
Office of the Secretary
Washington, D. C., March 20, 1956.

Hon. James E. Murray,
Chairman, Committee on Interior and Insular Affairs,
United States Senate, Washington, D. C.

My Dear Senator Murray: This is in reply to your request for the views of this Department on S.2115, a bill to amend the act of July 17, 1914, to permit the disposal of certain reserved mineral deposits under the mining laws of the United States.

* * * *

. . . the problem which S. 2115 is presumably intended to clear up concerns valid and subsisting rights acquired by discovery and location under the mining laws made prior to the enactment of the Mineral Leasing Act of February 25, 1920. . . .

* * * *

The apparent purpose of this bill is to obviate the necessity for requiring such as reconveyance and to permit the locator or his successor in interest to be issued a patent for the reserved minerals which are subject to valid and subsisting rights acquired by discovery and location under the mining laws.

Though we heartily endorse the purpose of S. 2115, we believe that certain amendments of a clarifying nature would be desirable. . .

Wesley A. D'Ewart,
Secretary of the Interior

The Senate Committee on Interior and Insular Affairs recommends the enactment of H.R. 6501. (1956 U.S.C.C.A., pp. 3391-94)

* * * *

No. 78-1815

Supreme Court, U. S.
FILED
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MICHAEL RODAK, JR., CLERK

In the Supreme Court of the United States

OCTOBER TERM, 1979

CECIL D. ANDRUS, SECRETARY OF THE INTERIOR,
PETITIONER

v.

SHELL OIL COMPANY AND D.A. SHALE, INC.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE TENTH CIRCUIT

BRIEF FOR THE PETITIONER

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In the Supreme Court of the United States

OCTOBER TERM, 1979

No. 78-1815

CECIL D. ANDRUS, SECRETARY OF THE INTERIOR, PETITIONER

v.

SHELL OIL COMPANY AND D.A. SHALE, INC.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE TENTH CIRCUIT

BRIEF FOR THE PETITIONER

OPINIONS BELOW

The opinion of the court of appeals (Pet. App. 1a-20a) is reported at 591 F.2d 597. The opinion of the district court (Pet. App. 22a-56a) is reported at 426 F. Supp. 894. The opinion of the Interior Board of Land Appeals (Pet. App. 60a-121a) is reported at 16 I.B.L.A. 112 and at 81 I.D. 370. The opinion of the administrative law judge (Pet. App. 122a-204a) is not reported.

JURISDICTION

The judgment of the court of appeals (Pet. App. 21a) was entered on January 25, 1979. On April 16, 1979, Mr. Justice White extended the time for filing a petition for a writ of certiorari to and including May 25, 1979, and on May 16, 1979, he further extended the time for filing to and including June 4, 1979. The petition was filed on June 4, 1979, and was granted on October 1, 1979 (App. 167). The jurisdiction of this Court rests upon 28 U.S.C. 1254 (1).

QUESTIONS PRESENTED

1. Whether Congress effectively amended the general mining law to exempt oil shale claims from the customary discovery requirement when it failed to take any action after becoming aware of the administrative practice of applying a different standard in such cases.

2. Whether the Secretary was equitably estopped to correct the Department's prior, legally erroneous interpretation of the general mining law and to apply the corrected standard to oil shale claims that had not proceeded to patent.

STATUTES INVOLVED

Section 1 of the Act of May 10, 1872, ch. 152, 17 Stat. 91, Rev. Stat. 2319, 30 U.S.C. 22, provides:

> Except as otherwise provided, all valuable mineral deposits in lands belonging to the United States, both surveyed and unsurveyed, shall be

> free and open to exploration and purchase, and the lands in which they are found to occupation and purchase, by citizens of the United States and those who have declared their intention to become such, under regulations prescribed by law, and according to the local customs or rules of miners in the several mining districts, so far as the same are applicable and not inconsistent with the laws of the United States.

The Act of July 9, 1870, ch. 235, 16 Stat. 217, Rev. Stat. 2329, 30 U.S.C. 35, provides in pertinent part:

> Claims, usually called "placers," including all forms of deposit, excepting veins of quartz, or other rock in place, shall be subject to entry and patent, under like circumstances and conditions, and upon similar proceedings, as are provided for vein or lode claims * * *.

Section 37 of the Mineral Leasing Act of 1920, ch. 85, 41 Stat. 451, 30 U.S.C. 193, provides:

> That the deposits of coal, phosphate, sodium, oil, oil shale, and gas, herein referred to, in lands valuable for such minerals, including lands and deposits described in the joint resolution entitled "Joint resolution authorizing the Secretary of the Interior to permit the continuation of coal mining operations on certain lands in Wyoming," approved August 1, 1912 (Thirty-seventh Statutes at Large, page 1346), shall be subject to disposition only in the form and manner provided in this Act, except as to valid claims existent at date of the passage of this Act and thereafter maintained in compliance with the laws under

which initiated, which claims may be perfected under such laws, including discovery.

The Act of July 20, 1956, ch. 652, 70 Stat. 592, amending the Act of July 17, 1914, 30 U.S.C. 122, provides:

> *Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the first sentence of section 2 of the Act entitled "An Act to provide for agricultural entry of lands withdrawn, classified, or reported as containing phosphate, nitrate, potash, oil, gas, or asphaltic minerals", approved July 17, 1914 (38 Stat. 509; 30 U.S.C. 122), is hereby amended by striking out "such deposits to be subject to disposal by the United States only as shall be hereafter expressly directed by law" and inserting in lieu thereof, "such deposits to be subject to disposal by the United States only as shall be hereafter expressly directed by law: *Provided, however,* That all mineral deposits heretofore or hereafter reserved to the United States under this Act which are subject, at the time of application for patent, to valid and subsisting rights acquired by discovery and location under the mining laws of the United States made prior to the date of the Mineral Leasing Act of February 25, 1920 (41 Stat. 437), shall hereafter be subject to disposal to the holders of those valid and subsisting rights by patent under the mining laws of the United States in force at the time of such disposal.

STATEMENT

1. Oil shale is a sedimentary rock containing an organic material called kerogen which, upon destructive distillation, will produce a substantial amount of oil (Pet. App. 127a). Oil shale is widely distributed throughout the United States and the world, although the quality and quantity of the deposits vary widely (*id.* at 128a-129a). One of the most extensive and richest deposits is found in the Green River Formation, which covers in excess of 16,000 square miles of northwestern Colorado and adjacent portions of Utah and Wyoming (*id.* at 129a-130a). The Green River Formation is not a homogeneous mass of oil shale; rather, it is composed of various units or members in which the oil shale is interspersed with sandstone and other rock that cannot be used to produce oil (*id.* at 172a-174a).

Although it has been known for many years that oil can be produced from oil shale, numerous attempts commercially to develop the resource in this country have met with failure. A nascent oil shale industry, based on eastern deposits, emerged in the 1850's but was abruptly abandoned following completion of the first successful natural petroleum well in 1859 (Pet. App. 145a). Thereafter, oil shale attracted little attention until approximately 1910, when rising demand for petroleum products, coupled with inaccurate predictions that American petroleum reserves would soon be exhausted, generated a renewed interest in oil shale. The advent of World War I greatly intensified this renewed interest.

During this period, oil shale found on the public lands, like petroleum, was deemed to be a locatable mineral subject to discovery under the general mining laws. See Act of February 11, 1897, ch. 216, 29 Stat. 526.[1] In the years immediately preceding 1920, there occurred what this Court has characterized as a "speculative fever" in oil shale claims, *Hickel* v.

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[1] The discovery requirement of the general mining law is central to the issues in this case and will be discussed in detail below. In brief, federal law provides that a person who discovers a valuable mineral deposit that has not been withdrawn under the Mineral Leasing Act may locate a claim to those valuable minerals and seek a patent to the lands on which they were found. Each such claim, in addition to meeting the substantive standards of the general mining law, must satisfy state location requirements that are not inconsistent with federal law, and "must be distinctly marked on the ground so that its boundaries can be readily traced." 30 U.S.C. 28; *Kendall* v. *San Juan Silver Mining Co.*, 144 U.S. 658 (1892); *United States* v. *Zweifel*, 508 F.2d 1150, 1153 (10th Cir.), cert. denied, 423 U.S. 829 (1975). A locator whose claim complies with all requirements of the general mining law is entitled to obtain a patent to the lands embraced in the claim, which divests the government of title and transfers it to the patent holder. 30 U.S.C. 22, 29; *Andrus* v. *Charlestone Stone Products Co.*, 436 U.S. 604, 609 (1978); *Boesche* v. *Udall*, 373 U.S. 472, 477 (1963).

The general mining law refers to two categories of mineral claims. A "lode" claim involves "veins or lodes of quartz or other rock in place bearing gold, silver, cinnabar, lead, tin, copper, or other valuable deposits * * *." 30 U.S.C. 23. Claims involving all other forms of mineral deposits are denominated as "placer" claims. 30 U.S.C. 35. See *United States* v. *Haskins*, 505 F.2d 246, 251 (9th Cir. 1974); 1 *American Law of Mining* §§ 5.9A, 5.20 (1979 ed.). Oil shale claims are considered to be placer claims. Oil Placer Act, ch. 216, 29 Stat. 526.

Oil Shale Corp., 400 U.S. 48, 54 (1970), and tens of thousands of oil shale claims were purportedly located on the public lands of northwestern Colorado and adjacent portions of Utah and Wyoming.

The location of oil shale claims ended on February 25, 1920, with the enactment of the Mineral Leasing Act, ch. 85, 41 Stat. 437, 30 U.S.C. 181 *et seq.* Section 37 of the Act, 30 U.S.C. 193, withdrew oil shale and several other minerals from further location under the general mining law and provided that future access to oil shale deposits on the public lands could be obtained only under the leasing provisions of the new statute. However, Section 37 preserved "valid claims existent at date of the passage of this Act and thereafter maintained in compliance with the laws under which initiated, which claims may be perfected under such laws, including discovery." Thus, only claims satisfying the requirements of those applicable laws, "including discovery," were preserved.

Not one of the tens of thousands of oil shale claims located before enactment of the Mineral Leasing Act was ever carried forward to successful commercial production (Pet. App. 102a-105a). Numerous experimental operations were undertaken over the years by private promoters and by the federal government, but these experiments succeeded only in demonstrating that shale oil could not yet commercially compete with the natural petroleum industry (*id.* at 78a-

95a).[2] As summarized by the Interior Board of Land Appeals in this case (*id.* at 105a):

> First, as a historical fact, the commercial production of oil from oil shale has never been competitive with the liquid petroleum industry. Second, the hypothetical studies at best confirm that the commercial exploitation of oil shale would not be competitive with the liquid petroleum industry. Third, without exception, every oil shale operation that has been attempted in this country has failed to show profitable production.

Despite repeated predictions over the last 50 years that a technological breakthrough or rising energy prices would make shale oil competitive with petroleum, even today, with high energy prices a familiar reality, commercial production of shale oil still remains in the future.

Notwithstanding this history, the Department of the Interior between 1920 and 1960 consistently recognized oil shale as a valuable mineral deposit locatable under the general mining law, and accordingly it issued patents to holders of oil shale claims who filed applications.[3] During this period, 523 patents were

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[2] We use the term "oil shale" to refer to the rock itself, while the term "shale oil" refers to the oil extracted from the oil shale.

[3] During the late 1920's and the 1930's, the Secretary cancelled thousands of oil shale claims for failure to perform the assessment work required by the mining laws. The validity of these contests is at issue in a related series of cases. See *Oil Shale Corp.* v. *Udall*, 261 F. Supp. 954 (D. Colo.

granted covering 2,326 oil shale claims and 349,088 acres of the public lands (Pet. App. 108a). These claims were patented under the Department's interpretation of the general mining law, best illustrated by the Secretary's decision in *Freeman* v. *Summers*, 52 L.D. 201 (1927), that oil shale was subject to a different discovery standard than was applicable to all other minerals. Although no other mineral could be patented in these circumstances, the Secretary allowed oil shale claims to proceed to patent notwithstanding that no commercial production had then occurred and none could be expected in the immediate future. In the early 1960's the Department reexamined this interpretation of the general mining law and determined that it was inconsistent with the statute. Concluding that oil shale claims could not lawfully be patented, the Secretary rejected respondent's patent applications, and this litigation followed.

2. This action involves two distinct groups of oil shale claims on the public lands in Garfield County, Colorado, all of which were located before the Mineral Leasing Act withdrew oil shale from further location under the general mining law. The location certificates for the first group of claims, designated as the Mountain Boy Nos. 6 and 7, were recorded on February 6, 1918, showing location on January 8, 1918 (Pet. App. 63a). Thereafter, the claims passed

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1966), aff'd, 406 F.2d 759 (10th Cir. 1969), rev'd *sub nom. Hickel* v. *Oil Shale Corp.*, 400 U.S. 48 (1970); *Oil Shale Corp.* v. *Morton*, 370 F. Supp. 108 (D. Colo. 1973), vacated and remanded, *Oil Shale Corp.* v. *Morton*, Nos. 74-1344 to 74-1347 (10th Cir. Sept. 22, 1975), cert. denied, 426 U.S. 949 (1976).

through several ownerships until they were acquired by Frank W. Winegar in 1956, who in turn contracted to convey them to the respondent Shell Oil Company. Winegar applied for patents on these and other claims on August 7, 1958, and subsequently conveyed his interests to Shell in 1964 for $30,000 (*id.* at 63a-64a). No patents were issued. Instead, on September 8, 1964, the government issued an administrative complaint alleging that the claims were invalid for lack of discovery and other grounds (*id.* at 64a-65a).

The second group of claims, known as the Harold Shoup Nos. 1, 2, 3 and 4, were located in 1917. In 1923 the claims were acquired by Karl C. Schuyler, who bequeathed them to his spouse in 1933. In 1960, Mrs. Schuyler incorporated respondent D.A. Shale, Inc., and transferred title of the claims to the corporation. The corporation filed patent applications for these and other claims on September 29, 1960 (Pet. App. 64a). On September 8, 1964, the government issued an administrative complaint alleging the claims to be invalid (*ibid.*).

The complaints were consolidated and extensive contest proceedings were heard by an Administrative Law Judge in 1967. The ALJ entered his decision on April 17, 1970 (Pet. App. 122a-204a). Based on a thorough consideration of the evidence regarding the commercial feasibility of oil shale since the claims had been located, the ALJ concluded that only expenditures for research and development or for purchase of oil shale claims could be considered to be

prudent. The ALJ further found that "[u]ntil a research program had demonstrated that shale oil could be produced at a cost competitive with petroleum, no prudent person would attempt to develop an oil shale mine" (*id.* at 165a).

Having determined that at no time did oil shale "justify present expenditures with a reasonable prospect of developing a profitable mine" (Pet. App. 166a), the ALJ stated that "[i]f this were a case of first impression I would * * * find that both before and after February 25, 1920, oil shale was not a valuable mineral deposit" (*id.* at 166a-167a). However, the Administrative Law Judge deemed himself bound by the Secretary's prior decision in *Freeman* v. *Summers*, 52 L.D. 201 (1927), even though he viewed that decision as "poorly conceived" (Pet. App. 170a). Accordingly, the ALJ concluded that patents should issue for the Mountain Boy Nos. 6 and 7 claims and the four Harold Shoup claims except for a portion of the No. 3 claim.[4]

3. The government appealed to the Interior Board of Land Appeals (IBLA), which reversed the ALJ's decision on June 28, 1974 (Pet. App. 60a-121a). The IBLA concluded from the evidence in the record that "[i]t is unlikely that any oil shale operation could have operated at a profit at the time these claims were located or at any time up to and including the time of these contest proceedings" (*id.* at 105a). While acknowledging that oil shale

[4] Certain other oil shale claims were declared null and void on grounds not relevant here.

might become commercially profitable if there were a dramatic improvement in the technology or an alteration of customary economic factors, the IBLA emphasized that "speculation that oil shale may someday be valuable in an economic sense is not evidence of its present value as of 1920 or 1966" (Pet. App. 107a). Thus, under the discovery standard applicable to all other minerals, oil shale did not qualify as a "valuable mineral deposit" within the meaning of the mining law (*ibid.*). The IBLA recognized that under *Freeman* v. *Summers* a showing of future value for oil shale was sufficient and that the Department of the Interior had for 40 years consistently issued patents on the theory that oil shale was a "valuable" mineral (*id.* at 108a-112a). However, the IBLA concluded that *Freeman* v. *Summers* had incorrectly interpreted the mining law by assuming "that possible future value for mining meets the requirement of present value" (*id.* at 109a). Accordingly, the IBLA overruled *Freeman* v. *Summers* as inconsistent with the statute and held that the claims at issue were null and void.

4. Respondents sought judicial review of the IBLA's decision in the United States District Court for the District of Colorado. Both sides filed motions for summary judgment (App. 164-165, 166). On January 17, 1977, the district court granted respondents' motion, holding that the "pre-1920 oil shale claims were discoveries of valuable mineral deposits and are valid claims" (Pet. App. 55a). The district court observed that *Freeman* v. *Summers* was at

variance with the traditional discovery standard of the mining laws applied by the Interior Department and by this Court because "[t]hose cases speak in terms of the present expenditure of labor and resources in order to develop a presently profitable mine, rather than the future development value of the mineral deposit" (*id.* at 29a-30a). Nevertheless, the district court distinguished these decisions on the ground that oil shale occupied a "unique position" (*id.* at 30a-31a). The court concluded (*id.* at 38a) that the "Congressional and administrative involvement in the disposal of oil shale lands demonstrates Congressional approval of the *Freeman* rule of discovery," which the courts "should respect and apply * * * in the absence of Congressional action to the contrary." Alternatively, the court held that "[e]ven if the Congressional treatment of the *Freeman* rule is considered merely as an interpretive aid, and not as hardening the *Freeman* rule into an act of law, * * * the Interior Department is estopped from challenging the validity of the pre-1920 oil shale claims involved in this case," since "[p]rudent investors detrimentally relied upon the deliberate actions and statements of high government authorities" (*id.* at 40a; footnote omitted).

5. The court of appeals affirmed the judgment of the district court (Pet. App. 1a-20a). The court acknowledged (*id.* at 3a) that the " 'valuable mineral deposit' standard or requirement was not met as to oil shale claims of the type here considered before 1920 as the standards were applied to the metallic

minerals," but it held (*id.* at 20a) that oil shale presented a "unique situation" in which the *Freeman* v. *Summers* standard had become "an addendum to the mining law which cannot be removed short of Congressional action." In reaching this result the court noted (*id.* at 9a-10a) that in 1930 Congress conducted an investigation into charges of impropriety in connection with the Department of the Interior's issuance of patents for oil shale claims, and particularly the decision in *Freeman* v. *Summers*. The court concluded (*id.* at 12a) that "Congress made an intense investigation into Interior's interpretation of the mining laws as to a very specific and narrow circumstance, and approved it." The court also noted (*id.* at 13a-14a) that in 1956 Congress had acted on the assumption that oil shale claims located prior to 1920 were valid claims when it eased one of the restrictions for taking mineral claims to patent. In sum, the court determined (*id.* at 17a) that "[t]he different treatment afforded all oil shale claims as to the 'valuable mineral deposit' element of a location became a part of the general mining laws by reason of its adoption and approval by both Houses of Congress during the intensive investigations of this very question and their affirmative resolution of the issue." Accordingly, the court held that the Department of the Interior has no authority to "change the application of the general mining laws" to these oil shale locations (*ibid.*).

SUMMARY OF ARGUMENT

Pursuant to the general mining law of the United States, a private individual who discovers a valuable mineral deposit on public lands may, upon prescribed conditions, claim those minerals and obtain a patent to the lands. In the Mineral Leasing Act of 1920, Congress withdrew certain specified minerals, including oil shale, from further location under the general mining law, and provided that future access by private parties to such minerals be governed by the leasing provisions of the Act. However, Congress preserved "valid claims existent at date of the passage of this Act and thereafter maintained in compliance with the laws under which initiated, which claims may be perfected under such laws, including discovery."

Under the mining laws, a patent can be issued by the Secretary only if the claimant has made a discovery of a valuable mineral deposit. To satisfy this standard, it is well established that a claimant must show, based on present facts, that a prudent person would be justified in currently expending resources to develop the minerals with a reasonable prospect of successful operation. A key measure in applying this discovery standard is whether the minerals on the claim can presently be extracted and marketed at a reasonable profit. However, as the record in this case persuasively demonstrates, oil shale in this country has not been capable of profitable commercial development for at least the last 100 years. Thus, as the court of appeals, the district court, the Interior Board of Land Appeals, and the Administrative Law Judge

all agreed, respondents' oil shale claims fail to meet the customary discovery standard under the general mining law.

Despite both the settled legal standard for discovery and the clear recognition that oil shale did not meet that standard, the Department of the Interior had consistently issued oil shale patents between 1920 and 1960. These patents were issued on the theory, best expressed in the Secretary's decision in *Freeman* v. *Summers*, that oil shale presented a unique situation and could be patented under the general mining law based solely on its potential future marketability. In the early 1960's the Department re-examined the rule of *Freeman* v. *Summers* and determined that it was inconsistent with the mining statute. Accordingly, the Department's interpretation of the discovery requirements for oil shale was corrected to conform with the general mining law. Thereafter, respondents' oil shale claims were invalidated and their patent applications denied on the ground of lack of discovery.

Contrary to the holding of the courts below, Congress has never adopted the *Freeman* v. *Summers* rule for discovery of oil shale as an addendum to the general mining law, so as to bar the Secretary's reconsideration and abandonment of the rule. An amendment to the statutory discovery standard was not effected by the mere failure of Congress to change an established, but legally erroneous, administrative interpretation of the mining laws. Since the Department's earlier construction was inconsistent with the

statute, only an affirmative enactment by Congress could suffice to ratify that erroneous construction. Although congressional committees in 1930-1931 conducted an investigation into alleged improprieties in the issuance of oil shale patents, this investigation did not lead to the passage of legislation, and any inferences from the actions of the committees or the views of individual congressman cannot alter the meaning of the general mining law. Nor does a 1956 amendment to the statute, which dealt with an issue wholly unrelated to discovery and did not focus upon oil shale in particular, indicate an intention by Congress to make a substantive change in the standard for discovery in the special case of oil shale by silently adopting the *Freeman* v. *Summers* rule.

In addition, the Secretary is not, as the district court held, equitably estopped to correct the Department's prior, legally erroneous interpretation of the statutory discovery requirements or to deny respondents' oil shale patents on that basis. It has long been established that the government cannot be estopped. This principle has special force where, as here, the asserted estoppel would preclude the Secretary from rectifying an earlier mistake of law and would result in the transfer of public lands to private interests in contravention of an Act of Congress. Such an estoppel would constitute an unconstitutional infringement of the sovereign immunity of the United States and an unconstitutional usurpation of Congress' legislative authority. Moreover, even if equitable estoppel can be invoked against the government in some situations,

the Secretary cannot be estopped in the circumstances of this case. Here, there was no affirmative misconduct by the government, serious injustice to respondents would not occur if the Secretary is not estopped, and the public interest would be unduly harmed by the imposition of estoppel. In these circumstances, the doctrine of equitable estoppel does not foreclose the Secretary from denying, in conformity with the statute, the oil shale patents sought by respondents.

ARGUMENT

I. RESPONDENTS FAILED TO MAKE A DISCOVERY OF A VALUABLE MINERAL DEPOSIT WITHIN THE MEANING OF THE MINING LAWS

The general mining law permits a private individual to claim for himself such valuable minerals as he may find on the public lands. The mining laws also permit him to obtain a patent for the lands on which such minerals are discovered. These laws are designed to encourage actual development of the Nation's mineral resources, and they are not intended merely to confer a private benefit or to allow conveyance of public lands for nonmining use. "Under the mining laws Congress has made public lands available to people for the purpose of mining valuable mineral deposits and not for other purposes." *United States* v. *Coleman*, 390 U.S. 599, 602 (1968). To assure the furtherance of this objective, a mining claim, to be valid, must strictly comply with the requirements of the mining laws as set forth in the Act of May 10, 1872, ch. 152, 17 Stat. 91, Rev. Stat. 2319 *et seq.*, 30 U.S.C. 22 *et seq.*

One of the principal requirements of the mining laws is that the claimant must make a "discovery" of a "valuable mineral deposit" within the limits of each claim. Rev. Stat. 2319, 2320, 2329, 2331, 30 U.S.C. 22, 23, 35; *Cole* v. *Ralph*, 252 U.S. 286, 295 (1920).[5] Although these terms are not defined in the statute, they have gained a well-defined meaning in the field of mining law through the decisions of the courts and the Secretary. *Chrisman* v. *Miller*, 197 U.S. 313, 321 (1905). The classic statement of the test for establishing a discovery of a valuable mineral deposit was made by the Secretary in *Castle* v. *Womble*, 19 L.D. 455, 457 (1894):

> [W]here minerals have been found and the evidence is of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine, the requirements of the statute have been met.

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[5] The general mining laws should not be confused with various land laws, such as the Act of July 17, 1914, ch. 142, 38 Stat. 509, 30 U.S.C. 121, which authorize the Secretary to classify and reserve from disposal those public lands that are "reported as valuable" for minerals or are "mineral" in character. Under such laws, the Secretary may properly classify and withdraw lands even if there has been no actual discovery of any mineral that could be presently extracted and marketed at a reasonable profit. *Diamond Coal and Coke Co.* v. *United States*, 233 U.S. 236, 239-240, 249 (1914); *Laden* v. *Andrus*, 595 F.2d 482, 487-488 (9th Cir. 1979); *Standard Oil Co. of California* v. *United States*, 107 F.2d 402, 414-415 (9th Cir.), cert. denied, 309 U.S. 654, 673 (1940); *State of Arizona*, 71 I.D. 49, 52-53 (1964).

This "prudent person" test has been endorsed by this Court on numerous occasions. See, *e.g.*, *Andrus* v. *Charlestone Stone Products Co.*, 436 U.S. 604, 607 n.4 (1978); *United States* v. *Coleman*, 390 U.S. 599, 602 (1968); *Best* v. *Humboldt Mining Co.*, 371 U.S. 334, 335-336 (1963); *Cameron* v. *United States*, 252 U.S. 450, 459 (1920).

In *United States* v. *Coleman*, *supra*, 390 U.S. at 602, the Court recognized that "profitability is an important consideration in applying the prudent-man test * * *." Under this "marketability" criterion, it must be shown that the minerals on the claim can be extracted, removed and marketed at a profit. *Coleman*, *supra*, 390 U.S. at 600; *Melluzzo* v. *Morton*, 534 F.2d 860, 862 (9th Cir. 1976). As the Court explained in *Coleman*, *supra*, 390 U.S. at 602:

> [T]he marketability test is an admirable effort to identify with greater precision and objectivity the factors relevant to a determination that a mineral deposit is "valuable." It is a logical complement to the "prudent-man test" * * *. The obvious intent [of the general mining law] was to reward and encourage the discovery of minerals that are valuable in an economic sense. Minerals which no prudent man will extract because there is no demand for them at a price higher than the cost of extraction and transportation are hardly economically valuable.

The "marketability" test is applicable to all minerals. *Roberts* v. *Morton*, 549 F.2d 158, 163 (10th Cir. 1976); *Converse* v. *Udall*, 399 F.2d 616 (9th Cir. 1968), cert. denied, 393 U.S. 1025 (1969).

To satisfy the "prudent person" and "marketability" test for discovery of a valuable mineral deposit, it must be shown that present circumstances justify the expenditure of resources for the current development of the mineral.[6] The standard is whether a claimant can show, based on present facts, that a prudent person would be justified in making current expenditures of resources to develop the claim with a reasonable prospect of a profitable operation. While there need not be a showing of actual profitable operations, this standard for discovery does require a claimant to demonstrate that it would be prudent currently to attempt to exploit the claim. It is not sufficient to show that the claim has present market

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[6] This rule was established by numerous decisions of this Court rendered early in the development of the mining laws. See, *e.g.*, *Davis's Administrator* v. *Weibbold*, 139 U.S. 507, 523 (1891):

> Rulings to the same effect upon applications for mineral patents are found in decisions of the department for many years. They are that such applications should not be granted *unless the existence of mineral in such quantities as would justify expenditure in the effort to obtain it is established as a present fact.* [Emphasis added.]

See also *Deffeback* v. *Hawke*, 115 U.S. 392, 405-406 (1885); *United States* v. *Iron Silver Mining Company*, 128 U.S. 673, 683-684 (1888); *Iron Silver Mining Company* v. *Mike and Starr Gold and Silver Mining Company*, 143 U.S. 394, 404-405, 412, 424 (1892); *Diamond Coal and Coke Co.* v. *United States*, 233 U.S. 236, 240 (1914); *Cole* v. *Ralph*, 252 U.S. 286, 299 (1920). Likewise, the early decisions of the Secretary required a claimant to show the value of the claim based on present facts. See *Castle* v. *Womble*, *supra*, 19 L.D. at 457; *Winters* v. *Bliss*, 14 L.D. 59, 62 (1892); *State of Washington* v. *McBride*, 18 L.D. 199, 202 (1894).

value based on the possibility of future development of the mineral or that it was a sound business decision to obtain the claim for its potential future operation, and courts and the Secretary have consistently invalidated claims based on speculation that at some future date there may be a market for those minerals. See, *e.g.*, *Hallenbeck* v. *Kleppe*, 590 F.2d 852, 859 (10th Cir. 1979); *Roberts* v. *Morton*, *supra*, 549 F.2d at 163; *Barrows* v. *Hickel*, 447 F.2d 80, 83 (9th Cir. 1971); *Foster* v. *Seaton*, 271 F.2d 836, 838 (D.C. Cir. 1959); *United States* v. *Estate of Alvis F. Denison*, 76 I.D. 233, 239-240 (1969).[7]

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[7] Frequently, as happened here, the issue of discovery does not arise until a patent application is filed, which may occur long after the claim was originally located. In such cases, the claimant must demonstrate not only that the claim was valuable when located but also that the claim remains valuable at the time the patent is sought. Claims that were once valuable but are so no longer will not be recognized. See *Best* v. *Humboldt Mining Co.*, 371 U.S. 334, 336 (1963); *Mulkern* v. *Hammit*, 326 F.2d 896, 898 (9th Cir. 1964). In addition, where a contest involves a mineral or land that has been withdrawn from further entry after the claims were originally located, the claimant must show that the claims were also valuable on the date the mineral or land was withdrawn. See *Hallenbeck* v. *Kleppe*, 590 F.2d 852, 856 (10th Cir. 1979); *Melluzzo* v. *Morton*, 534 F.2d 860, 862 (9th Cir. 1976); *Barrows* v. *Hickel*, 447 F.2d 80, 82 (9th Cir. 1971). Thus, in the present case, respondents must show not only that their claims were valuable at the time they were located, but also that they remained valuable both on February 25, 1920, when the Mineral Leasing Act withdrew oil shale from further location, and at the time of the contest. Since respondents' claims were not valuable at the time of location or in 1920, it is unnecessary to consider their later status. However, we note that the IBLA (Pet. App. 105a) and the ALJ (*id.* at 165a) concluded that respondents' claims were not valuable at the time of the contest proceedings.

In applying this standard, the absence of actual development of the claim is significant evidence of what a prudent person would do in the circumstances. While not conclusive, the claimant's failure to develop the claim over a substantial period of time will raise an inference that no discovery was made. See *Cole* v. *Ralph*, 252 U.S. 286, 299 (1920); *Cameron* v. *United States*, *supra*, 252 U.S. at 457; *Melluzzo* v. *Morton*, *supra*, 534 F.2d at 863; *United States* v. *Zweifel*, 508 F.2d 1150, 1156 n.5 (10th Cir.), cert. denied, 423 U.S. 829 (1975). Likewise, the fact that the claimant and others with similar claims have undertaken development is an indication that a valuable deposit has been discovered.

To require proof that a claim could currently be exploited at a reasonable profit is soundly based and serves several important objectives. As discussed above (pages 18-20, *supra*), the basic purpose of the mining laws is to promote actual development and operation of the Nation's mineral resources. This statutory policy is not fostered by recognizing claims that will remain idle for the indefinite future and may never be exploited. It is also doubtful, if claims could be sustained solely upon a showing of possible future profitability, that any claim containing any mineralization whatsoever could be ruled invalid. No matter how poor the quality or how small the quantity of the deposit, there is always the possibility that exploitation might someday become profitable as the better deposits are eventually depleted. If such speculative claims could be sustained, the public lands

would be severely encumbered and could not freely be devoted to other uses. Such a profligate waste of resources surely was not envisioned by the Congress. Finally, as the IBLA recognized in this case (Pet. App. 72a), adoption of a "future value" rule would reduce a mining contest to a speculative exercise turning upon the most tenuous of evidence regarding necessarily imponderable questions of fact.

In this case, the Administrative Law Judge determined that all of the claims at issue failed to comply with the discovery requirements of the general mining laws as of the dates of location, the date of withdrawal, and the date of contest (Pet. App. 165a):

> Many millions have been spent on oil shale since the revival of interest in this mineral in the early 1900's. But substantially all of the expenditures that could be considered prudent were for (1) research and development of a technically and economically feasible mining and retorting process, or (2) purchase of mining claims. Until a research program had demonstrated that shale oil could be produced at a cost competitive with petroleum, no prudent person would attempt to develop an oil shale mine. He would have no market for his product. The very fact that, in the more than half a century of interest in oil shale claims of the Green River Formation, not one profitable mine has been developed is a compelling reason for concluding that expenditure of money to that end would be imprudent.[8]

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[8] In addition, although acknowledging the possibility that oil shale might be profitably developed in the future and that

This determination was sustained by the IBLA (Pet. App. 105a-107a):

> We conclude as follows. First, as a historical fact, the commercial production of oil from oil shale has never been competitive with the liquid petroleum industry. Second, the hypothetical studies at best confirm that the commercial exploitation of oil shale would not be competitive with the liquid petroleum industry. Third, without exception, every oil shale operation that has been attempted in this country has failed to show profitable production. Fourth, appellees have held these claims for half a century without attempting to exploit them.
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> * * * Therefore, the oil shale deposits found on these claims never have been a valuable mineral deposit within the meaning of the general mining law.

The courts below (Pet. App. 3a-4a, 29a-31a) accepted these findings of fact and recognized that the oil shale claims at issue here could not be patented under the discovery standard applicable to all other minerals.

In sum, the record amply demonstrates, and the court of appeals, the district court, the IBLA, and the ALJ all agreed, that respondents' claims do not satisfy the customary requirements of the general

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shale oil might someday be competitive with petroleum, the ALJ concluded that the market value of oil shale claims based on such future events could not satisfy the discovery standard of the general mining law (Pet. App. 166a).

mining law. Thus, unless oil shale is subject to a different standard than other minerals, the conclusion is inescapable that respondents failed to make a valid discovery of a valuable mineral deposit.

II. CONGRESS HAS NOT EXCEPTED OIL SHALE CLAIMS FROM THE DISCOVERY REQUIREMENTS OF THE GENERAL MINING LAW

In the latter half of the nineteenth century, considerable deposits of petroleum began to be discovered on the public lands in the western United States. During this period, the Department of the Interior was not entirely certain that petroleum and related minerals were locatable under the provisions of the general mining law. See *Union Oil Company*, 23 L.D. 222 (1896). However, in 1897 Congress removed all doubts on the matter by enacting the Oil Placer Act, ch. 216, 29 Stat. 526, which provided that oil-bearing lands could be located and patented "under the provisions of the laws relating to placer mineral claims." Thus, claims for petroleum and similar minerals were to be judged under the same discovery standards as were applicable to all other minerals. See *Oregon Basin Oil and Gas Co.*, 50 L.D. 244 (1923), aff'd, *Oregon Basin Oil and Gas Co.* v. *Work*, 6 F.2d 676 (D.C. Cir. 1925), aff'd, 273 U.S. 660 (1927).

In the ensuing years, however, Congress grew increasingly dissatisfied with the general mining law as it applied to oil and certain other minerals, and, in 1920, the Mineral Leasing Act, ch. 85, 41 Stat.

437, 30 U.S.C. 181 *et seq.*, was passed. That statute withdrew oil and oil shale, as well as various other minerals, from further location under the general mining law, and provided that, henceforth, deposits of these minerals on the public lands would be available to private interests only under leases.

At the time the Mineral Leasing Act was passed, there were in existence numerous unpatented mining claims involving deposits of the recently withdrawn minerals on public lands. These unpatented claims constituted a form of property right that could not be extinguished. See *Best* v. *Humboldt Mining Co.*, 371 U.S. 334, 337-338 (1963). Therefore, in Section 37 of the Mineral Leasing Act (30 U.S.C. 193), Congress preserved "* * * valid claims existent at date of the passage of this Act and thereafter maintained in compliance with the laws under which initiated, which claims may be perfected under such laws, including discovery." Thus, although expressly providing that valid existing claims for the withdrawn minerals would continue to be recognized, Congress insisted that such claims meet all of the requirements of the general mining laws, "including discovery."

Prior to the enactment of the Mineral Leasing Act, the Department of the Interior had not issued any patents for oil shale claims. Shortly after the Act was passed, the General Land Office of the Department of the Interior requested legal guidance concerning certain pending patent applications for oil shale claims. In response to this inquiry, the Secre-

tary published the *Instructions* of May 10, 1920 (47 L.D. 548). The *Instructions* stated that although no oil shale operations in this country had reached the point of commercial development, there was currently "* * * great activity, particularly in the States of Colorado, Utah [and others], looking to such development and production * * *" and several small experimental plants were already completed or under construction. The *Instructions* then noted (47 L.D. at 549-550):

> The Department has had numerous inquiries as to the locatability and patentability of such deposits under the mining laws and in response thereto, *while disclaiming any intention of expressing a binding opinion in the premises*, it has nevertheless declared itself as favorable to the view that such deposits, *if valuable*, are subject to location and purchase under the mining laws. [Emphasis added.]

Finally, after quoting Section 37 of the Mineral Leasing Act (30 U.S.C. 193), the *Instructions* concluded (47 L.D. at 551):

> Oil shale having been thus recognized by the Department and by Congress as a mineral deposit and a source of petroleum, and having been demonstrated elsewhere to be a material of economic importance, lands *valuable* on account thereof must be held to have been subject to valid location and appropriation under the placer mining laws, *to the same extent and subject to the same provisions and conditions as if valuable on account of oil or gas.* Entries and applications for patent for oil shale placer claims will

> therefore, be adjudicated by your office in accordance *with the same legal provisions and with reference to the same requirements and limitations* as are applicable to oil and gas placers. [Emphasis added.]

Although the *Instructions* did not state that oil shale claims could proceed to patent regardless of whether oil shale could be currently extracted and marketed at a reasonable profit, the Department immediately began to issue patents to holders of oil shale claims.

In 1927, the Secretary of the Interior decided the contest in *Freeman* v. *Summers*, 52 L.D. 201. The contest arose when several oil shale claimants protested Summers' applications for homestead patents. The Department initially overruled the protests on the ground that the claimants had only discovered lean outcroppings of oil shale and had not physically exposed any rich oil shale deposit. However, the Secretary vacated this decision and granted rehearing. At the rehearing the claimants argued that their oil shale claims were valid because, given the geologic structure of the Green River Formation, a finding of lean surface deposits meant that the claim also contained rich deposits below. The Secretary agreed, finding that "* * * having made his initial discovery at or near the surface, [the claimant] may with assurance follow the formation through the lean to richer beds." [9] In so deciding, the Secretary consid-

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[9] Despite the outcome of *Freeman* v. *Summers*, the claimants' argument concerning the nature of the Green River Formation was based on an erroneous interpretation of the

ered it irrelevant that oil shale could not presently be marketed at a profit:

> While at the present time there has been no considerable production of oil from shales, due to the fact that abundant quantities of oil have been produced more cheaply from wells, there is no possible doubt of its value and of the fact that it constitutes an enormously valuable resource for future use by the American people.
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> It is not necessary, in order to constitute a valid discovery under the general mining laws sufficient to support an application for patent, that the mineral in its present situation can be immediately disposed of at a profit. As stated by the department in the case of *Narver* v. *Eastman* (34 L.D. 123, 125)—
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> * * * It does not follow that because there is no clear profit arising from the sale of an article that has been manufactured or produced that it therefore has no commercial value. Take for example the farmer. In the course of husbandry it frequently happens that different crops raised by the farmer when put in market do not sell for enough to pay the costs of their production and transportation, but can it be truly said that crops have no commercial value simply because after the same have been sold and all expenses incident to their production and ship-

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mining laws. Under the general mining law, a claimant must physically expose a vein or lode of mineral-bearing rock, and claims founded on geological inference will be struck down. *Barton* v. *Morton*, 498 F.2d 288, 290-291 (9th Cir. 1974); *Moseley* v. *Hickel*, 442 F.2d 1030 (9th Cir. 1971); *Henault Mining Company* v. *Tysk*, 419 F.2d 766 (9th Cir. 1969), cert. denied, 398 U.S. 950 (1970).

> ment deducted, there is no clear gain to the farmer, and therefore, as a corollary, that the lands are not valuable for agricultural purposes? And the same may be said as to the entry under this act of land valuable "chiefly for stone." Could not the land be valuable chiefly for stone even though, because of its remoteness from market or other causes, the stone could not then be sold for a remunerative price? [52 L.D. at 206.]

The *Freeman* decision became the target of an attack by Mr. Ralph S. Kelley, who was then the General Land Office Division Inspector in Denver. When the Department's response to Kelley's protests concerning the *Freeman* case failed to satisfy him, Kelley authorized a series of newspaper articles charging that the Department was engaged in an oil scandal similar to the recently-disclosed Teapot Dome incident (Pet. App. 9a-10a).[10] The first in the series of Kelley's articles was published in October 1930, and the articles received wide publicity.

At the time Kelley's articles were published, the House Committee on Public Lands was considering the problems relating to patents for oil shale mining claims that had been raised by this Court's decision in *Wilbur* v. *Krushnic*, 280 U.S. 306 (1930). In early

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[10] Much of Kelley's accusation was directed against Assistant Secretary E. C. Finney, who had written the *Freeman* decision and submitted it to Secretary Work for signature after Finney had rejected two draft decisions unfavorable to the mining claimants that had been prepared by the Solicitor's staff. Finney had been Assistant Secretary under Secretary of the Interior Albert B. Fall at the time the Teapot Dome leases were issued.

1931, the Committee held hearings at which both Kelley and Secretary of the Interior Wilbur testified. Although most of the testimony concerned various aspects of the assessment work issue that was the subject of the *Wilbur* v. *Krushnic* decision, certain witnesses, including Kelley and Secretary Wilbur, noted that oil shale could not currently be exploited at a profit. See *Application for Patent on Oil-Shale Lands: Consolidated Hearings Before the House Comm. on Public Lands*, 71st Cong., 3d Sess. 99, 156 (1931). Following conclusion of the hearings, the Committee recommended legislation placing a deadline on the filing of applications for oil shale patents. H.R. Rep. No. 2537, 71st Cong., 3d Sess. (1931). However, the Committee Report did not address the decision in *Freeman* v. *Summers* or the discovery issue. Indeed, the Report quoted the Secretary's comment that "other phases" of the "general problem as to the oil shale lands," such as "questions of discovery," might require legislative clarification. *Id.* at 9. The bill recommended by the Committee was not enacted.

The Senate inquiry concerning the Kelley charges was more extensive. On December 19, 1930, the Senate, taking note of the allegation that oil shale lands "* * * have been improvidently, erroneously, and unlawfully, if not corruptly, transferred to individuals and private corporations * * *," passed a resolution authorizing the Senate Committee on Public Lands and Surveys to undertake an investigation into the accusations. S. Res. 379, 71st Cong., 3d

Sess., 74 Cong. Rec. 1079-1080 (1930). That Committee held hearings on February 3, 6, 10, 12, 26 and 27, 1931. See *Hearings on S. Res. 379 Before the Senate Comm. on Public Lands and Surveys*, 71st Cong., 3d Sess. (1931). However, although the *Freeman* v. *Summers* decision and related issues concerning the patenting of oil shale lands were discussed before it, the Committee failed to submit any recommendations to Congress or to issue a report. Rather, after the hearings had concluded, Senator Nye, the Committee Chairman, informed the Secretary by letter that there was no reason why the Department "* * * should not proceed to final disposition of the pending applications for patents to oil shale lands in conformity with the law" (Pet. App. 11a). Thereafter, the Department, which had suspended issuance of oil shale patents pending the investigation, resumed the patenting of oil shale lands.

In 1956 Congress amended the mining laws by eliminating the requirement that locators had to obtain and convey to the United States any existing homestead patents for the surface lands in order to receive a patent on their pre-1920 claims to minerals withdrawn under the Mineral Leasing Act. Act of July 20, 1956, ch. 652, 70 Stat. 592, 30 U.S. 122. The conflict between homestead and mineral patents had arisen in a number of cases, including some that involved applications for oil shale patents. The 1956 amendment applied to all withdrawn minerals and was designed to facilitate the patenting of pre-1920 claims that were otherwise valid under the mining

laws. Nothing in the 1956 amendment specifically related to oil shale claims or the issue of discovery in general; at most, Congress may have assumed, based on the Department's position, that oil shale could be patented and took no steps to override that administrative construction.

Relying on the congressional activities in 1930-1931 and 1956, the court of appeals in this case held that Congress had enacted "an addendum to the mining law" (Pet. App. 20a) embodying the concept, as expressed in *Freeman* v. *Summers*, that oil shale claims may be patented regardless of whether the claims could be currently exploited at a reasonable profit. In effect, the court concluded that Congress' failure to enact legislation expressly reversing the Secretary's known practice of issuing patents to holders of oil shale claims effected an implied repeal of the established discovery requirements of the general mining law in the special case of oil shale.

As the court of appeals recognized (Pet. App. 3a), "[e]verything considered, it must be concluded that the 'valuable mineral deposit' standard or requirement was not met as to oil shale claims of the type here considered before 1920 as the standards were applied to the metallic minerals." This view—that oil shale claims are not patentable under the standards of the general mining law—was unanimously shared in this case by the district court (*id.* at 29a-30a), the Interior Board of Land Appeals (*id.* at 109a, 112a), and the Hearing Examiner (*id.* at 166a-167a). As discussed above (pages 18-26, *supra*), this conclusion was clearly correct. In light of the

"lack of conformance" of oil shale claims to the general mining law (Pet. App. 3a), the court of appeals' holding—that Congress' failure to disapprove the Department's issuance of patents for oil shale claims constituted an amendment to the statute—attributes to congressional inaction the intent to allow the conveyance of public lands to private interests in a manner that is unauthorized under the statute as written and enacted.

We are unaware of any decision of this Court, or of any legal doctrine or sound reason of policy, that infers from congressional silence the affirmative intention to alter an existing statute in order to permit that which is impermissible under the statute. This is not a case in which an administrative agency has exercised its discretion to choose one among several courses thought to be available under a statute. In appropriate circumstances, congressional acquiescence may be probative in confirming that the agency has indeed properly construed the statute and made an allowable choice.[11] Here, however, there can be no

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[11] The court of appeals (Pet. App. 17a-20a) and the district court (*id.* at 37a-39a) relied on a series of cases holding that Congress is presumed to approve the known administrative construction of a statute when it either re-enacts or deliberately declines to amend the statute. However, congressional re-enactment is a more probative guide to the meaning of a statute than is congressional inaction. See *United States* v. *Board of Commissioners of Sheffield, Alabama*, 435 U.S. 110, 135 (1978). Moreover, even "re-enactment * * * is an unreliable indicium at best." *Commissioner* v. *Glenshaw Glass Co.*, 348 U.S. 426, 431 (1955). "[T]he doctrine of legislative acquiescence is at best only an auxiliary tool for use in

doubt that the patenting of oil shale claims was not authorized under the general mining law, and it is an altogether different matter to infer from congressional inaction the positive design to amend the statute. Such an inference surely should not be indulged where, as here, the result would be the relinquishment to private interests of public lands that "[t]he [g]overnment * * * holds * * * in trust for all the people." *United States* v. *California*, 332 U.S. 19, 40 (1947).

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interpreting ambiguous statutory provisions" (*Jones* v. *Liberty Glass Co.*, 332 U.S. 524, 533-534 (1947)), and this "interpretative aid[]" could not lead to a contrary conclusion "if it were clear that the [Department's] action contradicted the requirements of the [general mining law]" (*Massachusetts Trustees* v. *United States*, 377 U.S. 235, 242 (1964)). "[T]hat rule [of congressional re-enactment] is no more than an aid in statutory construction. While it is useful at times in resolving statutory ambiguities, it does not mean that the prior construction has become so embedded in the law that only Congress can effect a change." *Helvering* v. *Reynolds*, 313 U.S. 428, 432 (1941).

In any event, the issue in the cases relied on by the courts below was whether an administrative agency had adopted a permissible reading of the enabling statute. In answering that question, the courts relied in part on the fact that Congress had acquiesced in the agency's construction, thereby lending support to the conclusion that the agency's position was within the scope of the act. Here, on the other hand, it is clear, even allowing due regard for congressional inaction, that the Department of the Interior's position in *Freeman* v. *Summers* was not authorized under the original mining law. Thus, rather than referring to congressional silence as an aid in discerning the meaning of enacted legislation, the courts in this case used it to find a substantive amendment to a statute that, as written and passed, does not support the Department's position.

At base, the court of appeals' decision in this case rests on the fact that "Congress has for some period failed affirmatively to act to change the interpretation which the [Secretary] gives to an otherwise unambiguous statute." *Cammarano* v. *United States*, 358 U.S. 498, 510 (1959). However, this Court has repeatedly recognized that " '[i]t is at best treacherous to find in congressional silence alone the adoption of a controlling rule of law.' " *NLRB* v. *Plasterers' Union*, 404 U.S. 116, 129-130 (1971), quoting *Girouard* v. *United States*, 328 U.S. 61, 69 (1946), and *Boys Markets, Inc.* v. *Retail Clerks Union, Local 770*, 398 U.S. 235, 241 (1970). Rather, the Court has "refuse[d] to infer [approval] from mere congressional silence" (*Oklahoma Tax Commission* v. *Texas Co.*, 336 U.S. 342, 367 (1949)) and has required "persuasive circumstances evidencing a clear design that congressional inaction be taken as acceptance * * *." *Boys Markets*, *supra*, 398 U.S. at 242. Courts should not "walk on quicksand * * * [by] try[ing] to find in the absence of corrective legislation a controlling legal principle." *Helvering* v. *Hallock*, 309 U.S. 106, 121 (1940). For these reasons, as this Court recently observed, "it is impermissible to draw inferences of approval from the unexplained inaction of Congress * * *." *United States* v. *Board of Commissioners of Sheffield, Alabama*, 435 U.S. 110, 135 (1978). See also *Houghton* v. *Payne*, 194 U.S. 88, 98-100 (1904) (congressional refusal to change longstanding administrative con-

struction "must yield to the positive language of the statute").[12]

The court of appeals' decision is also squarely at odds with this Court's analysis in recent cases such as *TVA* v. *Hill*, 437 U.S. 153 (1978), and *SEC* v. *Sloan*, 436 U.S. 103 (1978).

In *Hill*, TVA demonstrated that the Reports of both the House and Senate Appropriations Committees "generally reflected the attitude of the *Committees* either that the [Endangered Species] Act did not apply to Tellico or that the dam should be completed regardless of the provisions of the Act" (437 U.S. at 189; emphasis in original). But, in the absence of a statement in legislation passed by the Congress that the Tellico dam was to be completed regardless of compliance with the Endangered Species Act, this Court was "unable to conclude that the Act has been in any respect amended or repealed" (*ibid.*). The Court recognized (437 U.S. at 191) that both

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[12] As then-Judge Stevens explained in his dissent in *Hodgson* v. *Lodge 851, Int'l Assn. of Mech. & Aerospace Workers*, 454 F.2d 545, 562 (7th Cir. 1971), cited with approval in *United States* v. *Board of Commissioners of Sheffield, Alabama, supra*, 435 U.S. at 149 (Stevens, J., dissenting):

> Congress does not sit as a single-minded watchdog ready to bark out a clarifying amendment at every departure from its command. It is more like a slumbering army; when aroused it has power to march where it will. * * * An interpretation of a provision in the controversial and integrated statute which finally emerged from the legislative process in 1959 cannot fairly be predicated on unexplained inaction by different Congresses in subsequent years.

Committees have "expressly stated their 'understanding' that the earlier legislation would not prohibit the proposed expenditure" to complete the Tellico dam. But it observed that, despite the inclusion of these views in the Committees' Reports, "there is no indication that Congress as a whole was aware of TVA's position" (437 U.S. at 192). Accordingly, the Court held, quoting the *Regional Rail Reorganization Act Cases*, 419 U.S. 102, 132 (1974), that the Committee's statements, " 'however explicit, * * * cannot serve to change the legislative intent of Congress expressed before the Act's passage' " (437 U.S. at 193).

Similarly, in *SEC* v. *Sloan*, this Court rejected the contention that Congress had adopted a longstanding Commission construction that the Court concluded was "inconsistent with a statutory mandate" (436 U.S. at 118). The Court refused "to presume general congressional awareness of the Commission's construction" (436 U.S. at 121), even though Congress had re-enacted the underlying statutory provision "without disapproving the Commission's construction" after the Commission had "on at least one occasion made its views known to Congress in Committee hearings" and "at least one Committee [had] indicated on one occasion that it understood and approved tof the Commission's practice (436 U.S. at 119, 120; footnotes omitted). Moreover, the Court also stated that even if it were to assume Congress as a whole was aware of the Commission's construction, it was questionable whether "such awareness

at the time of re-enactment would be tantamount to amendment of what we conceive to be the rather plain meaning" of the statutory language (436 U.S. at 121).[13]

Thus, in *Hill* and *Sloan*, the Court rejected the argument that Congress had in effect amended an existing statute to ratify an administrative construction even though committee reports recommending subsequent legislation adopted the agency's interpretation and Congress acted to pass the committee's recommended legislation. Here, in contrast, the court of appeals accepted the argument that Congress had effectively repealed one of the principal requirements of the mining laws by its failure to take corrective measures after being apprised of the Department's actions. With respect to the 1930-1931 congressional hearings, it is undisputed that no legislation was enacted and no committee reports dealing with the discovery requirement were issued; the sole action

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[13] In addition, as the Court stated in *Oscar Mayer & Co.* v. *Evans*, No. 78-275 (May 21, 1979), slip op. 6-7:

> [The subsequently enacted amendments to the statute and the accompanying Committee Report were] written 11 years after the [Act] was passed in 1967 and such "[l]egislative observations * * * are in no sense part of the legislative history." *United Airlines, Inc.* v. *McMann*, 434 U.S. 192, 200 n.7 (1977). "It is the intent of the Congress that enacted [the Section], * * * that controls." *Teamsters* v. *United States*, 431 U.S. 324, 354 n.39 (1977). Whatever evidence is provided by the 1978 Committee Report of the intent of Congress in 1967, it is plainly insufficient to overcome the clear and convincing evidence [of Congress' intent in 1967].

See also *Quern* v. *Mandley*, 436 U.S. 725, 736 n.10 (1978).

taken was a letter to the Secretary from the chairman of one of the congressional committees that did no more than state that the Department could "proceed to final disposition of the pending applications * * * in conformity with the law" (Pet. App. 11a). The 1956 amendment to the statute dealt with a problem unrelated to the discovery question at issue here and applied to all minerals withdrawn from future claims by the Mineral Leasing Act of 1920. Congress did not then focus on the particular problems relating to oil shale and, as the district court held in this case (Pet. App. 36a), "did not specifically address the problem of discovery at all." [14]

In sum, Congress, in enacting Section 37 of the Mineral Leasing Act of 1920, expressly stated that existing claims would be preserved only if they met all of the requirements of the general mining law, including discovery. Nothing in the 1930-1931 committee activities or in the 1956 amendment to the statute provides a basis for concluding that Congress implicitly repealed, in the special case of oil shale, one of the essential and fundamental requirements of the general mining law. Such surmise regarding congressional intent is especially inappropriate in this case, for "[i]t has long been established that, when grants to federal land are at issue, any doubts 'are resolved for the Government, not against it.'" *Andrus* v. *Charlestone Stone Products Co.*, 436 U.S.

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[14] Moreover, the 1956 amendment expressly stated that only claims otherwise valid under the mining laws could be recognized.

604, 617 (1978), quoting *United States* v. *Union Pacific R.R.*, 353 U.S. 112, 116 (1957).

III. THE SECRETARY IS NOT ESTOPPED FROM CHALLENGING RESPONDENTS' OIL SHALE CLAIMS AS INVALID UNDER THE DISCOVERY STANDARD OF THE GENERAL MINING LAW

The district court, in addition to finding that Congress had in effect amended the mining statute to adopt the rule of *Freeman* v. *Summers*, also held as an independent ground for decision that the Secretary was estopped from challenging respondents' claims on the basis of the Department's changed interpretation of the discovery requirements applicable to oil shale (Pet. App. 39a-54a, 55a). This holding overturned the determination of the Interior Board of Land Appeals (IBLA) that the Secretary was not estopped (*id.* at 112a-119a). The court of appeals did not reach this issue, resting its decision solely on the ground that Congress' consideration of the decision in *Freeman* v. *Summers* was tantamount to "an addendum to the mining law which cannot be removed short of Congressional action" (*id.* at 20a).

In the unusual circumstances presented here, we submit that, if the judgment of the court of appeals is reversed on the question of congressional adoption of the *Freeman* v. *Summers* rule, this Court should address the estoppel issue notwithstanding that the court of appeals did not pass upon it.[15] Both the

[15] The issue was briefed and argued by the parties in the court below. In addition, the court of appeals has recently considered the estoppel issue in a closely analogous case. See

IBLA and the district court decided the issue of estoppel. Moreover, this litigation, which was commenced in August 1964, should not be unnecessarily prolonged. Resolution of the preceding statutory issue, if favorable to the Secretary, will not answer the fundamental question whether respondents' oil shale claims are lawfully subject to patent. The controversy between the parties will continue, and further proceedings will be required, unless this Court decides the estoppel question.

Given the paramount public interest in securing alternative sources of energy and the uncertainty that this lawsuit causes for the commercial development of oil shale as a potential domestic energy resource, it is obviously desirable that the case be finally resolved as soon as possible.[16] In our view, the estoppel issue warrants review by this Court because it is important and recurring. There is, moreover, a conflict among the circuits on whether the government can ever be estopped.[17] Respondents have indi-

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Enfield v. *Kleppe*, 566 F.2d 1139 (10th Cir. 1977); see also *Atlantic Richfield Co.* v. *Hickel*, 432 F.2d 587, 591-592 (10th Cir. 1970).

[16] In the event that the Court finds the factual record inadequate to dispose of the case conclusively, we submit that resolution of the underlying legal issues will help to narrow and expedite whatever further proceedings may be required.

[17] Compare, *e.g.*, *Goldberg* v. *Weinberger*, 546 F.2d 477 (2d Cir. 1976), cert. denied, 431 U.S. 937 (1977), with, *e.g.*, *Morris* v. *Andrus*, 593 F.2d 851 (9th Cir. 1978), cert. denied, No. 79-7 (Oct. 1, 1979), and *United States* v. *Ruby Co.*, 588 F.2d 697 (9th Cir. 1978), cert. denied, No. 78-1484 (June 4, 1979), and cases cited therein.

cated in their Brief in Opposition (2-3, 23-24) that they intend to urge estoppel as a ground for affirmance. In these circumstances, we submit that the Court may properly reach the question. See, *e.g.*, *United States* v. *New York Telephone Co.*, 434 U.S. 159, 166 n.8 (1977); *Hankerson* v. *North Carolina*, 432 U.S. 233, 240 n.6 (1977); *United States* v. *ITT Continental Baking Co.*, 420 U.S. 223, 226-227 n.2 (1975); R. Stern & E. Gressman, *Supreme Court Practice* 477-487 (5th ed. 1978).

A. Equitable Estoppel Does Not Apply Against the Government, and the Secretary Cannot Be Estopped From Revising a Legally Erroneous Interpretation of a Statute Regarding the Public Lands to Comport With the Correct Meaning of the Law

From the beginning of the Republic, this Court has recognized the rule that the government cannot be estopped even though hardship to private parties might result in individual cases. *Lee* v. *Munroe & Thornton*, 11 U.S. (7 Cranch) 366 (1813). This venerable principle, founded on the view that a contrary rule would make it "very difficult for the public to protect itself" (*id.* at 369-370), has been repeatedly and consistently observed by the Court. See *Hart* v. *United States*, 95 U.S. 316, 318-319 (1877); *Pine River Logging Co.* v. *United States*, 186 U.S. 279, 291 (1902); *Utah Power & Light Co.* v. *United States*, 243 U.S. 389, 408-409 (1917); *Sutton* v. *United States*, 256 U.S. 575, 579 (1921); *Jeems Bayou Club* v. *United States*, 260 U.S. 561, 564 (1923); *Cramer* v. *United States*, 261 U.S. 219, 234

(1923); *Utah* v. *United States*, 284 U.S. 534, 545-546 (1932); *Wilber National Bank* v. *United States*, 294 U.S. 120, 123-124 (1935); *United States* v. *San Francisco*, 310 U.S. 16, 31-32 (1940); *United States* v. *Stewart*, 311 U.S. 60, 70 (1940); *United States* v. *California*, 332 U.S. 19, 39-40 (1947); *Federal Crop Insurance Corp.* v. *Merrill*, 332 U.S. 380, 384 (1947); *Snyder* v. *Buck*, 340 U.S. 15, 19 (1950); *Automobile Club* v. *Commissioner*, 353 U.S. 180, 183 (1957); *INS* v. *Hibi*, 414 U.S. 5, 8 (1973). We are unaware of a single case in which this Court has held that the government was, or could be, estopped.[18]

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[18] In *INS* v. *Hibi*, *supra*, and *Montana* v. *Kennedy*, 366 U.S. 308, 314-315 (1961), the Court found it unnecessary to decide whether affirmative misconduct might estop the government from denying citizenship. See also *Wilber National Bank* v. *United States*, *supra* (Court did not decide whether the general rule barring estoppel against the government was subject to modification where the government acted in a commercial capacity).

Nor is *Moser* v. *United States*, 341 U.S. 41 (1951), to the contrary. In *Moser*, the Court held that in the circumstances of that case a Swiss national living in this country had not knowingly and intentionally waived his right to United States citizenship by seeking exemption from military service. In reaching this conclusion, the Court expressly disclaimed any consideration of the doctrine of estoppel (341 U.S. at 47). Moreover, the Court has subsequently cited *Moser* on only three occasions, none of them relating in any way to the issue of estoppel. See *Reid* v. *Covert*, 354 U.S. 1, 18 n.34 (1957); *Cabellos* v. *Shaughnessy*, 352 U.S. 599, 604 n.11 (1957); *Harisiades* v. *Shaughnessy*, 342 U.S. 580, 586 n.6 (1952). We do not think that *Moser*, which explicitly disavowed reliance on the estoppel doctrine, can be read as a silent departure from the Court's longstanding and uniform adherence to the rule against estopping the government.

The principle that estoppel cannot be invoked against the government reflects two fundamental precepts. First, the United States as sovereign is not subject to liability in the absence of its consent. See, *e.g.*, *United States* v. *Testan*, 424 U.S. 392 (1976). Where, as here, the effect of estoppel is to award relief against the United States that "require[s] action by the sovereign or disturb[s] the sovereign's property," sovereign immunity serves to protect the government from such liability. *Larson* v. *Domestic & Foreign Commerce Corp.*, 337 U.S. 682, 687-688 (1949).[19] Second, under our constitutional system of separation of powers, the Congress, and the Congress alone, is vested with the legislative authority to enact the laws of the United States. These laws are not subject to amendment by officials of the Executive Branch, and any action by such officials that contravenes the provisions of a valid statute is void. To estop the government because of the conduct of its Executive officials in violation of an Act of Congress would constitute a distortion of our tripartite system and a usurpation of congressional powers. See, *e.g.*, *Dixon* v. *United States*, 381 U.S. 68, 73 (1965); *Snyder* v. *Buck*, *supra*, 340 U.S. at 19; *United States* v. *San Francisco*, *supra*, 310 U.S. at 29, 31-32; *West* v. *Standard Oil Co.*, 278 U.S. 200, 220-221 (1929).

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[19] Equitable considerations cannot serve to surmount or defeat the sovereign immunity of the United States against unconsented liability. See *United States* v. *Neustadt*, 366 U.S. 696 (1961); *United States* v. *Minnesota Mutual Investment Co.*, 271 U.S. 212 (1926).

The Court has recognized that "[t]he doctrine of equitable estoppel is not a bar to the correction * * * of a mistake of law." *Automobile Club* v. *Commissioner*, *supra*, 353 U.S. at 183. This principle is fully applicable where the mistake of law is made by the head of an agency, for even Cabinet members have no authority to act in disregard of valid Acts of Congress. See, *e.g.*, *West* v. *Standard Oil Co.*, *supra*, 278 U.S. at 220-221; *Sutton* v. *United States*, *supra*, 256 U.S. at 579. Thus, when it was determined that the Secretary's prior interpretation of the discovery requirements for oil shale claims was legally erroneous, the Department was not estopped from correcting its position to conform to law even though a third-party "may have relied to his detriment on the [previous] mistake." *Dixon* v. *United States*, *supra*, 381 U.S. at 73.

The importance of preserving Congress' rightful authority and protecting the national interest from unauthorized Executive actions is especially great in the area of public lands. Under Article IV, Sec. 3, Cl. 2 of the Constitution,[20] Congress' power over the public domain "is without limitations" (*United States* v. *San Francisco*, *supra*, 310 U.S. at 29), and unauthorized Executive actions should not frustrate that plenary power or deprive the public of its interest in this unique resource. This Court has been

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[20] This provision reads: "The Congress shall have Power to dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States."

vigilant to protect the public's interest in federal lands, emphasizing that "no right arises from an invalid claim of any kind. All must conform to the law under which they are initiated; otherwise they work an unlawful private appropriation in derogation of the rights of the public." *Cameron* v. *United States*, 252 U.S. 450, 460 (1920), quoted in *Best* v. *Humboldt Mining Co.*, 371 U.S. 334, 337 (1963). Nor can a breach of duty by a federal official serve to defeat this public interest. As the Court explained in *United States* v. *California*, *supra*, 332 U.S. at 40 (footnote omitted):

> The Government, which holds its interests [in public lands] * * * in trust for all the people, is not to be deprived of those interests by the ordinary court rules designed particularly for private disputes over individually owned pieces of property; and officers who have no authority at all to dispose of Government property cannot by their conduct cause the Government to lose its valuable rights by their acquiescence, laches, or failure to act.
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> * * * [W]e are faced with the issue as to whether state or nation has paramount rights in and power over this [public land], and that great national question is not dependent upon what expenses may have been incurred upon mistaken assumptions.

See also *Utah Power & Light Co.* v. *United States*, *supra*, 243 U.S. at 409, quoted in *INS* v. *Hibi*, *supra*, 414 U.S. at 8. And the Secretary's authority, like that of all federal officials, is circumscribed by this grave public trust:

> The Secretary is the guardian of the people of the United States over the public lands. The obligations of his oath of office oblige him to see that the law is carried out, and that none of the public domain is wasted or is disposed of to a party not entitled to it.

Knight v. *United States Land Association*, 142 U.S. 161, 181 (1891). See also, *e.g.*, *Cameron* v. *United States*, *supra*, 252 U.S. at 460, quoted in *Best* v. *Humboldt Mining Co.*, *supra*, 371 U.S. at 337.

In *United States* v. *San Francisco*, *supra*, the Court rejected an estoppel contention quite similar to that advanced by respondents here. In that case a federal statute enacted in 1913 had granted the City various public lands to develop a system for generating and distributing electricity, subject to reversion for failure to comply with certain limitations on the sale, assignment or transfer of such electrical power. At the behest of the Secretary of the Interior, the United States filed suit alleging that the City had failed to observe these restrictions. In defense, the City asserted, among other things, that the Department of the Interior had consistently construed the statute from 1913 to 1937 to permit the activities of the City, that this construction was correct, and that the United States was estopped to change its position (310 U.S. at 31). The Court quickly disposed of the City's assertions (310 U.S. at 31-32):

> We cannot accept the contention that administrative rulings—such as those here relied on—can thwart the plain purpose of a valid law. As to

> estoppel, it is enough to repeat that "* * * the United States is neither bound nor estopped by acts of its officers or agents in entering into an arrangement or agreement to do or cause to be done what the law does not sanction or permit" [quoting *Utah Power & Light Co.* v. *United States*, 243 U.S. 389, 409 (1917)].

Here, as in *United States* v. *San Francisco*, the Department is asserted to be estopped to correct a longstanding but erroneous construction of a statute, with the result that respondents will obtain a benefit to the public lands under an Act of Congress without satisfying the requirements and restrictions contained in that very Act. This effort to use estoppel to defeat the statute should be rejected. For the Court to conclude that the Secretary is estopped from correcting the prior erroneous construction of the discovery standard for oil shale would be to sanction the conveyance of public lands in contravention of the statutory terms and conditions set by the Congress. Such a result would be constitutionally impermissible and would exact too high a price from the public for the legal errors of Executive officials.[21]

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[21] In deciding that the government could be estopped, the district court in this case relied principally on a series of Ninth Circuit decisions (Pet. App. 40a). In our view, those decisions, in addition to being distinguishable from the case at bar, are fundamentally incorrect and inconsistent with the decisions of this Court. We also note that the Tenth Circuit apparently disagrees with the Ninth Circuit's view. In *Enfield* v. *Kleppe*, 566 F.2d 1139 (10th Cir. 1977), a case very similar to the instant one, an oil lessee argued that the Department of the Interior was estopped from changing

B. The Secretary Cannot Be Estopped in the Circumstances of This Case

If we assume that the government can be estopped in some circumstances, we nevertheless submit that this is an inappropriate case for applying the doctrine. Even under Ninth Circuit precedent, invoked by the district court in this case (Pet. App. 40a), the Secretary is not estopped here.

The Ninth Circuit has recognized that the government cannot be estopped unless, among other necessary elements, (1) the government has engaged in "wrongful conduct" or "affirmative misconduct," [22]

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regulations that did not comport with the statute and applying the new regulations to leases that were already in effect. The court of appeals disagreed, holding that the earlier regulation was inconsistent with the statute and that the government was not estopped even if the prior regulation had long been in effect and had been relied on by the lessee. See also *Atlantic Richfield Co.* v. *Hickel*, 432 F.2d 587, 591-592 (10th Cir. 1970) (footnotes omitted):

> The premise of appellant's argument is built around the rule which states that the doctrine of equitable estoppel binds the Government for the conduct of its agents while they are acting within the scope of their employment. But a corollary to that rule is the established principle that the United States may not be estopped from asserting a lawful claim by the erroneous or unauthorized actions or statements of its agents or employees, nor may the rights of the United States be waived by unauthorized agents' acts. As harsh as the tenet is under practical application, an administrative determination running contrary to law will not constitute an estoppel against the federal government.

[22] See also *INS* v. *Hibi*, *supra*, 414 U.S. at 8-9; *Montana* v. *Kennedy*, *supra*, 366 U.S. at 314-315.

(2) a "serious injustice" will result if the government is not estopped, and (3) "the public's interest would not be unduly damaged by the imposition of estoppel." See *e.g.*, *Morris* v. *Andrus*, 593 F.2d 851, 854 (9th Cir. 1978), cert. denied, No. 79-7 (Oct. 1, 1979); *United States* v. *Ruby Co.*, 588 F.2d 697, 703-704 (9th Cir. 1978), cert. denied, No. 78-1484 (June 4, 1979); *United States* v. *Wharton*, 514 F.2d 406, 412-413 (9th Cir. 1975); *United States* v. *Lazy FC Ranch*, 481 F.2d 985, 989 (9th Cir. 1973). None of these elements has been demonstrated here.

1. *Affirmative misconduct*

The Department's earlier good-faith, but erroneous, construction of the discovery requirements for oil shale, and the consequent issuance of oil shale patents, do not approach the level of "affirmative misconduct." Here, there has been no "wrongful conduct," "misconduct," or other "blameworthy" action. See *United States* v. *Ruby Co.*, *supra*, 588 F.2d at 703-704 & n.7; *Santiago* v. *INS*, 526 F.2d 488, 493 (9th Cir. 1975) (en banc), cert. denied, 425 U.S. 971 (1976). Indeed, the one fact established by the congressional investigation in 1930-1931 was that the decision in *Freeman* v. *Summers* and the issuance of oil shale patents were not based on misconduct. Rather, in this case, there was at most an innocent mistake on a question of law. If this were sufficient to establish estoppel, the government would in effect become a guarantor for every legal opinion it ventures, with the consequence of potentially vast liability. Such a

result hardly accords with the view that estoppel cannot be applied against the government in cases involving title to public lands "without compelling reasons." *United States* v. *Ruby Co.*, *supra*, 588 F.2d at 704.

The district court also discussed at length various statements made by Department of the Interior officials during or shortly after World War I (Pet. App. 42a-45a).[23] In these public statements, the officials stated their belief that domestic petroleum supplies would soon be depleted, that oil shale would then become a viable source of energy, and that therefore oil shale resources should now be developed.[24] Once

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[23] For the most part, the district court relied on newspaper and periodical accounts reporting these statements and describing the oil shale business before 1920.

[24] Not all governmental assessments concerning oil shale were as sanguine as those cited by the district court. For example, as the House Committee on Public Lands stated (H.R. Rep. No. 563, 65th Cong., 2d Sess. 18 (1918)):

> In view of the fact that no commercial quantity or any appreciable amount of shale oil has ever been produced in this country, nor any standardized process of production has yet been evolved or recommended or agreed upon in this country by the Bureau of Mines or anyone else, and it has not yet been demonstrated that the oil-shale industry can be made commercially profitable, in view of the location and conditions of the oil shale in this country, and that it will require the hazard and employment of many millions of dollars, and the long application of expert experience and intelligence of the highest order to develop the industry to a productive and profitable state, for the purpose of encouraging the

again, none of these statements constitute "affirmative misconduct." Rather, these statements reflected the honest beliefs of various Department officials who projected a forthcoming energy shortage and publicly urged the development of oil shale to meet the anticipated crisis. That their forecasts proved inaccurate does not convert their good-faith statements into "affirmative misconduct." Moreover, these statements did not even advert to the requirements of the mining law or suggest that claims could validly be located regardless of whether oil shale could then be extracted and marketed at a profit. Thus, these statements are wholly inadequate as a basis for estoppel.

2. *Serious injustice*

No serious injustice to respondents would result in this case if the Secretary is not estopped. See *Union Oil Co. of California v. Morton*, 512 F.2d 743, 748-749 n.2 (9th Cir. 1975).

The district court's opinion did not address the question whether respondents or their predecessor-in-interest relied on the statements or actions of the Department and, if so, whether such reliance was reasonable. In fact, with the exception of the Secretary's announcement in 1917 of the creation of two naval oil shale reserves, none of the statements cited

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experiment upon and the development of the oil-shale industry in this country, your committee very earnestly recommends exceedingly liberal conditions to those who are willing, under the supervision of the Government, to undertake the risk and expenditure of the necessary time and money to make the production of shale oil possible.

by the district court could have been relied on by respondents or their predecessors in locating their claims, since all of those statements were made after the claims had already been located (Pet. App. 42a-45a, 130a, 134a).[25] The same is true for the *Instructions*, issued in 1920, and for *Freeman* v. *Summers*, which was not decided until 1927 (*id.* at 115a-116a). And no oil shale patents were issued before 1920. Hence, location of the claims was not made in reliance on the Department's earlier position.[26] Moreover, development of the claims was also not undertaken in reliance on that position, for, as the Interior Board of Land Appeals concluded (*id.* at 117a), respondents "have not in fact developed them." There-

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[25] In addition, a reasonable person would not have relied upon this type of statement. The statements in question indicated only that certain Interior officials believed that oil shale would become a commercially feasible source of energy in the near future and that attempts should be made to develop that resource. A reasonable person considering such statements would have realized, in light of the fact that no commercial production of oil shale had occurred in this country for 50 years (Pet. App. 79a-80a), that the prospects for present, profitable development were subject to serious doubts. The doctrine of equitable estoppel does not obviate the duty of due care. See *United States* v. *Aetna Casualty & Surety Co.*, 480 F.2d 1095, 1099 (8th Cir. 1973).

[26] In any event, location of a claim is a simple and inexpensive matter. See note 1, *supra*; see also *Andrus* v. *Charlestone Stone Products Co.*, 436 U.S. 604, 616 (1978). As the IBLA explained (Pet. App. 116a-117a), location "requires only a minimal expenditure" and "involves no change of position."

fore, at most, respondents' reliance was confined to the acquisition of their claims.[27]

The record in this case clearly shows that respondents' expenditures for acquiring their claims were quite limited. The Interior Board of Land Appeals found (Pet. App. 117a) that respondent D.A. Shale, Inc., or its predecessors did not invest "more than a minimal amount in the purchase of [their] claims," and that respondent Shell Oil Co. expended less than $19,000 before 1964 (when this contest was filed by the Department) to perfect its title and prepare its patent application. In exchange for those modest expenditures, respondents claim the right, under the rubric of equitable estoppel, to patent substantial tracts of public land for the nominal amount of $2.50 per acre. See 30 U.S.C. 37. To hold that the Secretary is not estopped to refuse to grant these patents to respondents surely will not work a serious injustice.

Nor is it any ground of objection that other claims were patented prior to 1960.[28] In general, an admin-

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[27] Respondent Shell Oil Co. did not acquire its claims until 1964, after the Department had repudiated *Freeman* v. *Summers* and instituted the instant contest proceedings. Moreover, the Department had not issued any oil shale patents since 1960. In these circumstances, there is a substantial question whether Shell in acquiring its claims reasonably relied on the Department's earlier interpretation of the discovery standard for oil shale (Pet. App. 117a-118a).

[28] Under 43 U.S.C. 1166, "[s]uits by the United States to vacate and annul any patent shall only be brought within six years after the date of the issuance of such patents." No oil shale patents have been issued since 1960.

istrative agency necessarily retains the flexibility to modify its earlier positions and to apply those modifications to the case immediately before it. See *NLRB* v. *Weingarten, Inc.*, 420 U.S. 251, 265-266 (1975). Moreover, *Freeman* v. *Summers* was overruled because it was founded upon an erroneous interpretation of the general mining law.[29] It is not unjust either to abandon a position legally at variance with the controlling statute even though there may have been reliance on the prior construction, or to apply the revised standard to all cases that are still before the agency. Such a correction of an error of law is not proscribed by the doctrine of equitable estoppel. See *Dixon* v. *United States*, 381 U.S. 68, 74-75 (1965); *Calbeck* v. *Travelers Insurance Co.*, 370 U.S. 114, 127 n.15 (1962); *Automobile Club* v. *Commissioner*, 353 U.S. 180, 183 (1957); *Manhattan*

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[29] In addition, by 1964, when the instant contest proceedings were begun, it had become clear that the *Freeman* v. *Summers* rule was not promoting any of the congressionally established objectives of the general mining law. Between 1920 and 1960, the Department had conveyed more than 300,000 acres of public lands to holders of pre-1920 oil shale claims. However, although "[u]nder the mining laws Congress has made public lands available to people for the purposes of mining valuable mineral deposits and not for other purposes," *United States* v. *Coleman*, 390 U.S. 599, 602 (1968), the public has yet to receive the first drop of commercially produced shale oil from any of these lands. In view of this half-century of nonproduction, the Secretary properly concluded that *Freeman* v. *Summers* should be abandoned.

General Equipment Co. v. *Commissioner*, 297 U.S. 129, 134 (1936).[30]

Moreover, it is well established that "[a] locator who does not carry his claim to patent * * * take[s] the risk that his claim will no longer support the issuance of a patent" at a later date. See *Best* v. *Humboldt Mining Co.*, 371 U.S. 334, 336 (1963). Here, for over 40 years, no patent was sought on respondents' claims.[31] Until patents are issued and title is thereby transferred from the government to the private party, the public lands on which the claims are located remain subject to the continuing jurisdiction of the Secretary. As the Court stated in *Cameron* v. *United States*, 252 U.S. 450, 460-461 (1920), quoted in *Best* v. *Humboldt Mining Co.*, *supra*, 371 U.S. at 337:

> But no right arises from an invalid claim of any kind. All must conform to the law under which they are initiated; otherwise they work an unlawful private appropriation in derogation of the rights of the public.
>
> Of course, the land department has no power to strike down any claim arbitrarily, but so long as the legal title remains in the Government it does have power, after proper notice and upon adequate hearing, to determine whether the

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[30] The Tenth Circuit has recently followed this analysis in a closely analogous case involving public lands. See *Enfield* v. *Kleppe*, 566 F.2d 1139 (10th Cir. 1977).

[31] The failure to protect these claims by obtaining patents also suggests that respondents or their predecessors did not consider the claims to be very valuable.

> claim is valid and, if it be found invalid, to declare it null and void. * * * 'In other words, the power of the department to inquire into the extent and validity of the rights claimed against the Government does not cease until the legal title has passed.'

See also *Boesche* v. *Udall*, 373 U.S. 472, 478 (1963); *West* v. *Standard Oil Co.*, 278 U.S. 200, 210 (1929).

In these circumstances, respondents would not suffer a serious injustice if the Secretary is not estopped from invalidating their claims.

3. *Public interest*

Indeed, the far greater harm that could result from this case would fall not upon respondents but upon the public. If the Secretary is estopped, the public stands to lose lands reserved to it under federal statute.[32] This is not a case in which estoppel of the Secretary would put respondents in the same position they would have occupied if the alleged wrongs of government agents had not occurred. Compare *United States* v. *Wharton*, 514 F.2d 406, 412-413 (9th Cir. 1975). Rather, having no rightful claim to the lands under the general mining law,

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[32] While estimates are somewhat uncertain, we are advised that approximately 5 million acres of federal lands in Colorado, Wyoming, and Utah may be affected by the outcome of this case. These lands include the richest oil shale deposits in the United States (Pet. App. 77a-78a) and are also valuable for other uses, such as grazing, recreation, and wildlife preservation.

respondents would gain a windfall at the expense of the public.[33]

The conveyance of title under a patent, and the consequent loss of governmental control over the lands, would disadvantage the public interest in several ways. Once a patent has been issued, respondents are under no obligation to utilize the lands to develop oil shale, but instead are free to delay development or to dedicate the lands to any other use they may choose. Indeed, they are under no obligation to use the land at all. See *Andrus* v. *Charlestone Stone Products Co.*, 436 U.S. 604, 615, 616 (1978). Thus, there would be no assurance that the oil shale deposits would be worked to the benefit of the public. At the same time, any other, or additional, public uses to which the lands might be put would be precluded by the issuance of patents to respondents. In addition, the government's ability to safeguard the public from the potentially adverse environmental impact of developing this largely undeveloped land would also be greatly impaired by the issuance of patents. On the other hand, if the lands are subject to the leasing provisions of the Mineral Leasing Act, then the National Environmental Policy Act, 42 U.S.C. 4321 *et seq.*, and the authority of the Secretary to impose appropriate terms and conditions in the leases, will serve to ensure that development

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[33] Even the Ninth Circuit is "very reluctant to apply estoppel against the Government in cases involving rights to public land * * *." *Union Oil Co. of California* v. *Morton*, 512 F.2d 743, 748 n.2 (9th Cir. 1975).

occurs with due regard for environmental considerations. Finally, estoppel against the government would deprive the public treasury of substantial revenues. As noted above (page 56, *supra*), valid claims may be patented for $2.50 per acre. In contrast, as the IBLA discussed (Pet. App. 107a-108a n.54), the high bid in early 1974 for certain oil shale leases in Colorado was over $41,000 per acre; the lowest winning bid at that time among four leases for oil shale in Colorado and Utah was approximately $9000 per acre.[34] Future bids will undoubtedly be higher as the technology to produce shale oil advances and the price of petroleum continues to rise. Equitable estoppel should not be applied to allow respondents to gain such an undeserved benefit at public expense.

We submit that the Secretary is not estopped in this case to invalidate respondents' oil shale claims.

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[34] Notwithstanding the amounts of these bids, it remains the case even today "that oil has not yet been produced from oil shale in paying quantities" (Pet. App. 108a n.54.)

CONCLUSION

The judgment of the court of appeals should be reversed.

Respectfully submitted.

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IN THE

Supreme Court of the United States

October Term, 1979

CECIL D. ANDRUS,
Secretary of the Interior,
Petitioner,

v.

SHELL OIL COMPANY and
D. A. SHALE, INC.
Respondents.

ON WRIT OF CERTIORARI TO THE UNITED STATES
COURT OF APPEALS FOR THE TENTH CIRCUIT

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I. The Interior Department's consistent recognition that oil shale of the Green River Formation was a valuable mineral under the mining laws and the savings clause of the Mineral Leasing Act was a conclusion accepted by Congress in the enactment of the Mineral Leasing Act, in its review in 1930-31 of the Department's patenting of oil shale claims, and in the enactment in 1956 of legislation to facilitate oil shale patenting. ---------- 24

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C. The enactment in 1956 of legislation to facilitate the issuance of oil shale patents further confirmed and expressed the understanding and intent of Congress that pre-Leasing Act mining claims within the Green River Formation were eligible for patent insofar as discovery requirements were concerned. ---------- 46

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IN THE

Supreme Court of the United States

October Term, 1979

No. 78-1815

CECIL D. ANDRUS,
Secretary of the Interior,

Petitioner,

v.

SHELL OIL COMPANY AND
D.A. SHALE, INC.,

Respondents.

ON WRIT OF CERTIORARI TO THE UNITED STATES
COURT OF APPEALS FOR THE TENTH CIRCUIT

BRIEF FOR THE RESPONDENTS

QUESTION PRESENTED

Whether the Department of the Interior's recognition of oil shale as a valuable mineral eligible for claim location and patent was known to and accepted and endorsed by Congress when it enacted the Mineral Leasing Act of 1920, and Interior's subsequent administration of the oil shale lands in conformity with recognition of the value of oil shale was subsequently confirmed by Congress, so as to

preclude Interior from retroactive repudiation of its prior view and practice by administrative fiat.

REASONS FOR BRIEFING THREE ADDITIONAL QUESTIONS

Uncertainties as to the scope of the review that the Court wishes to give this case make it necessary for respondents to brief three additional questions. The uncertainties arise from these circumstances. The petitioner originally sought review only of the question stated above. The respondents opposed the petition, but requested that, if it were granted, review should not be confined to the single question decided by the court of appeals and presented by the petition but should include, as well, the other three questions decided by the district court. Under Rule 23(1)(c) the order of this Court granting certiorari related only to the single question presented in the petition. Notwithstanding this, the petitioner's brief has argued not only that question but has argued as well one of the three other questions decided by the district court. Therefore, to seek clarification of the uncertainty as to the scope of review in these circumstances, the respondents moved the Court either to limit the petitioner's brief to the question covered by the petition for certiorari or to extend the order granting certiorari to the other three questions decided by the district court. This motion was denied by order dated December 3, 1979. It is in light of these circumstances that it becomes necessary for the respondents to brief not only the question set forth above but also the three further questions that were likewise decided by the district court in granting summary judgment to the respondents. Those three additional questions are:

1. Whether the oil shale deposits of the Green River Formation satisfied the value aspects of the discovery re-

quirements of the mining laws as of the time of the location of oil shale placer mining claims thereon prior to 1920, and as of the present.

2. Whether the Department of the Interior is obliged to apply to the oil shale claims in suit the same rule of discovery for the Green River Formation that it formulated between 1916 and 1920, formally promulgated in 1920, and consistently applied and maintained thereafter until the early 1960's, during which years patents issued for 2,326 oil shale claims aggregating 349,000 acres.

3. Whether the Department of the Interior, having induced private investment in the initiation, purchase and development of oil shale claims and having induced large expenditures to develop commercial technologies for the production of shale oil, by stating that oil shale claims within the Green River Formation could be taken to patent and developed commercially, is now estopped from maintaining that no oil shale claim was ever patentable. (This issue is argued in the petitioner's brief, but was not included in the petition for certiorari or dealt with in the order of the Court granting the petition.)

STATEMENT

In the years 1913-1915 geological field investigations conducted by the Department of the Interior through the United States Geological Survey largely confirmed the vast extent and potentially immensely rich petroleum content of the oil shales of the Green River Formation in northwestern Colorado and adjacent portions of Utah and Wyoming. Early in 1916 the Department through the Oil Board of the Geological Survey studied the technologies then in use in foreign oil shale industries, which dated back to the seventeenth century in some cases, and the economic prospects for

the development of a profitable industry producing shale oil from the Green River Formation and as a consequence of these studies recommended that the oil shale lands be classified as mineral lands, that is, as lands valuable for minerals, so as to preclude alienation under the non-mineral land laws. The Board recommended that despite their mineral value the lands should not, however, be withdrawn from claim location under the mining laws "because it is desired to encourage the development of experimental plants based upon the acquisition of limited areas . . . ," recognizing that "the time when extraction of oil from these shales will become profitable is indefinite and the industry is wholly experimental as far as the United States is concerned. . . ."[1]

In 1916 the Department suggested to the Senate Committee on Public Lands that oil shale be included within the mineral leasing bill then under consideration, noting that as oil "becomes higher in price it will pay to extract from this bituminous shale the oil" and advising that the oil shale lands had not been withdrawn from private appropriation under the mining laws. *See* App. 9-11, Statements of E. C. Finney, of the Board of Appeals, and George Otis Smith, Director of the Geological Survey. At the same time the Department was responding affirmatively to inquiries from members of Congress whose constituents were prepared to make investments in the development of oil shale but before doing so wished to know whether oil shale lands of the Green River Formation were open to claim location under the

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[1] Ex. G-98, Minutes of the meeting of the Oil Board held January 31, 1916, pp. 4-5. References to "Ex." are to exhibits in the record before the Department of the Interior and the courts below. Exhibits prefixed by "G" were offered by the Government and those prefixed by "C" by the claim owners or Contestees, as the respondents were designated in the original administrative proceeding. The Appendix in this Court is cited as "App.", and the Appendix to the petition for certiorari as "Pet. App.".

mining laws. App. 12-13. The areas of the Green River Formation that had been marked out by the Geological Survey were formally classified by the Department on May 23, 1916, "as mineral lands, valuable as a source of petroleum and nitrogen...." App. 14. Implementing the recommendation of the Oil Board, the Department stated that

> "The lands have not been recommended for withdrawal because the oil-shale industry is not yet developed in the United States, and as it is desired to give opportunity for the establishment of experimental plants, it is believed the lands should remain open for the present to acquisition under the mineral land laws...." *Id.*

The lands so classified included the land embraced within the Mountain Boy claims Nos. 6 and 7 and the Harold Shoup claims Nos. 1-4, the six claims at issue here; the lands remain so classified to this day. *See* Ex. G-99.

Later in 1916 oil shale reserves were established for the Navy. This followed from a request by Acting Secretary of the Navy Franklin D. Roosevelt that such reserves be established because "Various official reports of the Interior Department indicate that the petroleum deposits of the United States are being progressively extracted, and at such a rate that it will be a matter of only a few years before it will be necessary to supplement the petroleum yield with oil derived from shale, if the Navy's urgent, extensive and increasing need of the future is to be met." App. 16. Roosevelt urged quick action since substantial opposition to the establishment of the reserves would "be aroused . . . when the value of the oil shale deposits becomes known." *Id.* The Interior Department promptly cooperated, advising that "Two areas have been selected, one in Colorado, and one in Utah, in order to safeguard against the reduction of the reserves through the existence of valid claims not of

record in the Department of the Interior.'"[2] App. 16. The Department also noted that "The unreserved oil shale areas are so greatly in excess of those reserved that the interference with any commercial oil shale industry that may be established will not be serious." App. 16-17.[3]

The Department's Annual Report for the Fiscal Year ending June 30, 1917, advised the public that

> "As a result of the investigations of the western oil shales, it is believed that it is now commercially feasible to work selected deposits of shale in competition with oil from oil wells. . . ."[4]

and that

> "Several commercial plants for mining and treating the shale have been planned and the Bureau of Mines will closely follow the developments." App. 17-19.

These and many similar Government statements both reflected and encouraged private efforts aimed at developing a

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[2] Under traditional procedure the location of a mining claim upon the public domain was accomplished without any filing with or other notification to the Department of the Interior or any other federal agency. State law, which supplemented the federal mining law to the extent not inconsistent with it, required that location certificates be recorded in the local county court.

[3] Interior Department Field Agents reported in 1918 that "We were informed by a representative of the U.S. Geological Survey that it was well known that bona fide oil shale placer locations existed within the confines of this shale reserve at the time it was created but that it was placed wherever it least interfered with bona fide locations. . . ." App. 39-40.

[4] The same view was reached in an extensive retrospective study by the Department of the Interior and offered in evidence in the present litigation. This study indicated that there then existed adequate technology to make a full range of petroleum products from oil shale, and that commercial operations on the mining claims at issue here would have been profitable in the years prior to 1920. App. 122-133; Exs. G-665, G-666. *Accord*, Letter of April 24, 1918, from Director, U.S. Bureau of Mines, to The Haviland-Armstrong Co. App. 37-38.

commercial shale oil industry. *E.g.*, App. 28, 36-38, 133-135, 138-144, 146-148. As private activity increased, the Department continued to stimulate public interest in locating oil shale claims by advising Congress and the public that oil shale lands were available for claim location under the mining laws. Thus, Congressman Edward Taylor of Colorado was told in September 1917 that "the Government has consistently held that the oil shale lands should not be withdrawn, but should be classified as mineral land and made available to the public under the United States mining laws." App. 19-20. Similar views were communicated to R. D. George, the State Geologist of Colorado. App. 21-22.

In hearings on a mineral leasing bill in 1917, Department officials testified that oil could be produced from oil shale for about $2 per barrel. Ex. C-391, *Leasing of Oil Lands, Hearings before the Senate Committee on Public Lands,* 65th Cong., 1st Sess. 250-52 (June 23, 1917). The price of oil was then about $2 per barrel and was rising rapidly. *E.g.*, App. 77, 120. This estimated production cost for oil shale was similar to a number of private estimates[5] including a study performed for Karl C. Schuyler, Jr., in the early 1920's at the time he acquired the Shoup claims Nos. 1-4 which are at issue here. Ex. C-792.

Early in 1918 oil shale mining claimants in Colorado became concerned over reports that lands valuable because they contained oil shale deposits would be included in the new mineral leasing bill and that the Department would not recognize the validity of their unpatented mining claims. In February of that year they obtained a hearing with high Department officials in Washington, which was also attended by a number of Senators and Representatives from Colorado, Utah, and Wyoming. The Department assured

[5] *E.g.*, September 29, 1913, "Preliminary Report of the Oil-Bearing Shales Situated at Grand Valley, Colorado," prepared for the Reed-Midwest Investment Company, Colorado Springs, Colorado, by John C. Sparks, G.Sc., F.C.S., 30 Church Street, New York, Ex. C-220, excerpted at App. 4-9.

the claimants and their legislators that inclusion of oil shale in the leasing bill, which the Department favored because of the mineral value of the oil shale lands, would not adversely affect previously initiated oil shale mining claims. As a protection to the oil shale claimants, the Department indicated that an explicit savings clause would be prepared. This was done, and the product with slight change became the "savings clause" in Section 37 of the Mineral Leasing Act of 1920.[6] App. 71-78, 25-37.

Department officials and Congressman Taylor asked the mining claimants to present to the House Committee on Public Lands the same report about development efforts that had been provided at the Interior Department hearing. App. 25-26, 71-76. The requested presentation was made at a hearing on February 26, 1918. The principal speaker at the 1918 hearings for the oil shale claimants, State Geologist Russell D. George of Colorado, testified that there were reasonable prospects for commercial success, but that success was by no means assured.[7] Near the end of the presentation by the oil shale claim owners, Congressman Taylor observed that in light of his communications with the Interior Department, he believed that if the

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[6] Section 37 provided that deposits of coal, phosphate, sodium, oil, oil shale and gas "in lands valuable for such minerals" should thenceforth be subject to disposition only as provided in the Act (that is, by lease) "except as to valid claims existent at the date of the passage of this Act and thereafter maintained in compliance with the laws under which initiated, which claims may be perfected under such laws, including discovery." The full text of Section 37 is quoted at pages 3-4 of the petitioner's brief.

[7] "I believe it is going to be possible to make a commercial success of it if plants of the size I have spoken of are installed and if absolutely correct scientific management is used. We can not claim any get-rich-quick game at all; that is utterly impossible. I am saying 'we.' I have not any financial interest in it whatsoever. I do not own a claim; I do not own a share of stock; and I have refrained from taking any financial interest because I wanted to be in a position to speak as I am speaking to-day in regard to this industry—for the people, for the State, and I believe for the Nation." App. 31.

savings clause provision were "put in this bill it will be scrupulously recognized and enforced, and all those people who strictly comply with the law will get a patent. . . ." App. 37. Following these hearings, the Committee reported out amendments to the mineral leasing bill, which for the first time included "oil shale" among the minerals to be available thereafter only through leasing and, also for the first time, included a "savings clause," then Section 28 of the bill. *E.g.*, App. 71-77, 25-37; 56 Cong. Rec. 7033-7035 (May 24, 1918); 56 Cong. Rec. 7104-7107 (May 25, 1918).

Interior Department officials advised the oil shale claim representatives that it would not be necessary for them to repeat their testimony before the Senate Public Lands Committee. App. 76. This proved to be accurate. The House amended the bill passed by the Senate, S. 2812, to provide for leasing of lands containing valuable deposits of "oil shale" and to add a savings clause, 56 Cong. Rec. 7033 (May 24, 1918); 56 Cong. Rec. 7104-05 (May 25, 1918); H. Rep. No. 563, 65th Cong., 2d Sess. 17-18 (May 14, 1918); and the amended bill then passed the House and was accepted in conference by the Senate early in 1919. H. Conf. Rep. No. 1059, 65th Cong., 3rd Sess. 10, 15 (Feb. 11, 1919); S. Conf. Rep. on S. 2812, Doc. No. 392, 65th Cong., 3rd Sess. (Feb. 13, 1919). In fact, the House and Senate Committees had both agreed on the addition of "oil shale" and the savings clause before the House passed S. 2812. Representative Raker of the House Committee advised the House:

> "This provision, particularly lines 6 to 12, with the addition of the words "oil shales," has been one of the special provisions in the bill that has been given more careful consideration by the committee, and especially by a subcommittee consisting of Senator LENROOT and myself, who spent much time on it. . . . The purpose was to protect those who had valid claims." 56 Cong. Rec. 7105 (May 25, 1918).

Although twice reported out of conference (see H. Rep. No. 1138, 65th Cong., 3rd Sess., Feb. 25, 1919), the bill failed of enactment due to the press of business in the Senate at the end of the session. Essentially the same bill was introduced later in 1919 in the next Congress, and with little further debate (not material here) became the Mineral Leasing Act of 1920, ch. 85, 41 Stat. 437, 30 U.S.C. 181 *et seq.*[8] As Representative Sinnott, Chairman of the House Conference Committee, summarized for the House on February 10, 1920:

> "[T]he bill is practically the same as it passed the House last October. It is also modeled on the bill that passed the House at the last session and the session before and the session before.
>
> "In brief, the bill does away with and repeals the present laws providing for the patenting and the absolute disposal by the Government of the mineral resources named in the bill. This bill is strictly a leasing bill. No longer can patents be issued deeding away these mineral resources of the Government, except as to some valid claims now existing upon mineral lands provided for in section 37 of the bill. But *apart from that,* no longer will . . . oil shale . . . be deeded away by the Government."[9] (Emphasis supplied.)

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[8] S. 2775, the bill that became the Mineral Leasing Act of 1920, as introduced on August 15, 1919, contained the oil shale and savings clause provisions. 58 Cong. Rec. 3886, 4056-57. The Senate passed the bill on September 3, 1919 (58 Cong. Rec. 4789), the House amended and passed it on October 30 (*id.* at 7780-81), differences were resolved in conference (see H. Conf. Rep. No. 600, 66th Cong., 2d Sess., Feb. 6, 1920), both houses passsed the bill soon thereafter, and it was signed into law on February 25, 1920.

[9] 59 Cong. Rec. 2709. The House report on S. 2775, No. 398, p. 16 (Oct. 21, 1919), explained that "Section 21 contains the provision with relation to oil shale, and is substantially the same as the Senate draft and last year's conference draft."

Shortly following enactment of the Mineral Leasing Act of 1920, the first application to patent oil shale mining claims reached Department officials in Washington, and the importance of the question and the precedential consequence of the answer to it led to its decision at the Secretarial echelon. The answer was given in the *Instructions* of May 10, 1920, "Act of February 25, 1920—Oil Shale Placer Claims," published at 47 L.D. 548. App. 49-54. These *Instructions* constituted the Department of Interior's formal statement, in the form characteristically employed for the promulgation and recording of such decisions, that claims located for oil shale in the Green River Formation were eligible for patent. The *Instructions* reviewed the history of commercial exploitation of oil shale elsewhere in the world, the current activity in the western oil shale regions, the consistent views previously expressed by the Department in response to inquiries about the locatability of oil shale claims, the 1916 classification, establishment of the Naval Oil Shale Reserves, and the savings clause of the Mineral Leasing Act of 1920 and concluded that

> "Oil shale having thus been recognized by the Department and by Congress as a mineral deposit and a source of petroleum, and having been demonstrated elsewhere to be a mineral of economic importance, lands valuable on account thereof must be held to have been subject to valid location and appropriation under the placer mining laws. . . ." App. 54.

Patent was accordingly issued. These *Instructions,* issued by First Assistant Secretary Vogelsang, were reinforced by Secretary Payne, who on August 5, 1920, wrote to Senator Phipps that the Department's legal force had been unanimously of the view that the *Instructions* were "the only conclusion that could be reached under the law and the facts" and that no reasons had been presented which warranted a contrary view. App. 56.

It is conceded by the Department that the claims in suit here are not distinguishable, in respect to the richness and quantity of their oil shale content, from the La Paz claims patented as a consequence of the 1920 *Instructions.*[10]

Over the next decade, the *Instructions* were followed in the patenting of 1,177 mining claims, aggregating a total of 184,000 acres (App. 83-84; Exs. C-190 and G-104 (tabulations of patenting)) and in a consistent series of departmental decisions, *e.g., Smallhorn Oil Shale Refining Co.,* 52 L.D. 329, 331 (1928) ("... the Department has long held that lands classified as valuable for oil shale as a source of petroleum and nitrogen were prior to the passage of the leasing act open to mineral entry under the mining laws ..."); *Standard Shales Products Co.,* 52 L.D. 522, 523, 527 (1928) ("Timely discovery being sufficiently shown in the patent application ... the mineral entry should be clear-listed and patent should issue. ..."); *Instructions, Location of Oil Shale Placer Claims,* 52 L.D. 631, 633 (1929).

The only attempt to depart from the 1920 *Instructions* was a short-lived effort in the mid-1920's by some field officials to apply the view that a claim not containing an actual surface exposure of oil shale which was itself sufficiently rich in oil yield to satisfy the criteria of the Geological Survey for classification as mineral lands should be regarded as invalid even though it was known that extensive and rich deposits of oil shale, more than sufficient to satisfy the classification criteria, underlay the surface. This question was raised and settled at the Secretarial echelon in favor of the oil shale claimant in *Freeman* v. *Summers, United States, Intervener* (*On Rehearing*), 52 L.D.

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[10] The claims in suit and the La Paz claims both lie at the southern perimeter of the oil shale escarpment on the north bank of the Colorado River. Department geologists testified below that the oil shale strata exposed in the La Paz claims and in the claims in suit are lateral extensions of the same deposit. Tr. 505, 509; see also Ex. C-885, p. 1.

201 (1927), App. 59-67; the result was adherence to the practice under the *Instructions*.[11]

As the Director of the Bureau of Land Management advised in 1957, "The Department concluded on May 10, 1920 (47 L.D. 543) that oil shale is a valuable mineral subject to location and entry under the mining law. These 'Instructions' have never been overruled or vacated and they bind the Bureau until they have been." App. 120.

In the fall of 1930, a disgruntled Interior field official, Ralph Kelley, published a series of articles in the *New York World* charging high Department officials with improper administration of the mining laws with respect to Green River Formation oil shale claims, focusing in particular on the *Freeman* v. *Summers* case. These charges led to a prompt suspension of patenting by order of Secretary Wilbur, an investigation and report by Assistant Attorney General Seth Richardson, a lengthy investigation by the Senate Committee on Public Lands led by Senator Walsh of Montana, of Teapot Dome fame, and the consideration of amendatory or remedial legislation by the House Public Lands Committee.[12] All three inquiries evidenced a

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[11] The *Instructions* had been applied on several occasions between 1920 and 1927 in recognition of the sufficiency of "lean" exposures where substantial oil shale deposits were known to lie beneath the surface. *See, e.g.,* Exs. C-119, pp. 5, 6, 11, 12; C-117, p. 8; C-110, pp. 5-6; C-113, p. 23; C-190 (showing patenting of the claims described in the other cited exhibits).

[12] Kelley's articles appear in Ex. G-729, *Hearings Before the Senate Committee on Public Lands and Surveys on S. Res. 379 Authorizing the Committee To Inquire into the Charges Made by a Former Government Employee in Relation to the Disposition and Alienation of Oil Shale Lands of the United States"*, 71st Cong., 3rd Sess. (Jan. 31-Feb. 27, 1931) (hereinafter cited as *1931 Senate Hearings*); *see also* Ex. C-321, Report by Assistant Attorney General Seth Richardson; Ex. C-320, *Consolidated Hearings Before the House Committee on the Public Lands, Applications for Patent on Oil-Shale Lands,* 71st Cong., 2d and 3rd Sess., Parts 1, 2 and 3 (1930-1931).

thorough understanding of the Department's practices in issuing oil shale patents. Richardson concluded that *Freeman* v. *Summers* was at most "fairly debatable" and that "the oil shale lands of the United States are being vigorously and honestly administered by Secretary Wilbur and his Department." Ex. C-321, pp. 54, 167; App. 69-71.

On November 6, 1930, Secretary Wilbur wrote to both Public Lands Committees advising that the current assessment work controversy was "only part of the general problem as to oil shale lands and it may be that other phases of it not now covered by legislation, such as the question of discovery . . . will impress you as requiring legislative definition." App. 71.

Ralph Kelley testified before both Committees. So also did Secretary Wilbur, who indicated that absent congressional direction to the contrary, the Department would continue to issue patents for oil shale claims that contained deposits of the Green River Formation. *1931 Senate Hearings* 213-215, 341. The House hearings resulted in a Committee report which, although taking note of the Secretary's invitation to consider definition of questions of discovery, recommended minor modifications of the mining laws, including a requirement that patent applications for oil shale claims be filed by July 1, 1934, but with no change in discovery requirements or interpretations. H.R. Rep. No. 2537, 71st Cong., 3rd Sess., to accompany amended H.R. 15002, "Bill Concerning Oil Shale Lands" (Feb. 6, 1931) (Ex. C-380). The Committee concluded that such legislation

> "clarifies the controversial points in a spirit which is fair to the Government, and at the same time respects every existing valid right now held by any individual claimant. It defines a policy for the guidance of the Department of the Interior, and creates two new requirements not heretofore found in the mining laws, but which appear to be necessary, proper, and advisable for the final disposition of the questions affecting

> oil shale lands, only. These changes do not apply to any other class of public lands." App. 81.

At the outset of the Senate hearings, Secretary Wilbur urged a very thorough investigation, stating "We propose to see this through to the very last case. . . . Certain charges have been filed. . . . They have been of a certain character and now that the Senate has started in on this we feel that we should have clearance in the Senate," to which Senator Walsh replied "Absolutely." App. 89. The Committee did conduct a thorough hearing into the Department's administration of the mining laws with respect to oil shale claims, and into Kelley's charges. E. C. Finney testified for the Department that because of a then surplus of oil, oil shale could not have been sold at a profit in 1927 or 1930. Ex. G-729, pp. 22-23. The Committee volunteered no criticism of what the Department had done and issued no recommendation for any change. Following the hearings, Secretary Wilbur made inquiry of the Committee, and on April 18, 1931, was told by the Chairman, Senator Nye, that

> "I have conferred with Senator Walsh and beg to advise that there is no reason why your Department should not proceed to final disposition of the pending application for patents to oil shale lands in conformity with the law." App. 103.

The Department thereupon resumed processing pending oil shale patent applications. Those applications and others filed thereafter resulted in the issuance of patents for 1,149 oil shale claims between 1931 and 1960, when the present controversy arose. Exs. C-190; G-104.

In the late 1930's and early 1940's, Congress was reminded of the patentability of oil shale mining claims by Department efforts to obtain legislation to overthrow this Court's decision in *Ickes* v. *Virginia-Colorado Development*

Corp., 295 U.S. 639 (1935), which was then interpreted as giving the Department no right to attack oil shale claims for nonperformance of annual work. App. 104-113. In endorsing such legislation the Department "emphasized that valid existing claims may be maintained, unaffected by the proposed bill. . . . The proposed legislation is not retroactive. . . ." App. 106-107.

The patenting of oil shale claims continued after World War II, but difficulties developed in the practicalities of obtaining patent that led to the adoption of remedial legislation in 1956 to facilitate the issuance of oil shale patents. Because the oil shale lands had been classified by Interior as valuable mineral lands in 1916, the minerals in them could not be acquired by homesteaders under the agricultural land laws, but this did not preclude the patenting of the surface to homesteaders. This was true where a valid but unpatented oil shale mining claim existed. *E.g.*, *James W. Bell*, 52 L.D. 197 (1927); *Brennan* v. *Udall*, 251 F.Supp. 12 (D. Colo. 1966), *aff'd*, 379 F.2d 803 (10th Cir.), *cert. denied*, 389 U.S. 975 (1967). If, subsequent to the issuance of a surface patent, an oil shale claimant sought patent, it was Department practice to insist that the oil shale claimant first obtain the reconveyance to the United States of the surface patent, on the theory that Congress had only authorized the Department to issue a mineral patent if it also embraced surface interests, not a patent for the minerals only.

This procedure worked well enough where the surface owner was cooperative, for it was customary in that case that the issuance of a complete patent by the United States to the oil shale claimant was followed by the mining claimant's reconveyance of the surface back to the former surface owner. But where the surface owner would not cooperate, the oil shale claimant was stymied and issuance of a patent to him under the Department policy was blocked. To deal with this impasse, Congress in 1956 authorized the Department to issue a patent for the mineral

estate alone. Act of July 20, 1956, 70 Stat. 592, 30 U.S.C. 122. This legislation was sponsored by Representative Wayne Aspinall, whose western Colorado congressional district included the principal oil shale deposits of the Green River Formation, and, while general in terms, was well understood to have been enacted to deal with the patenting of oil shale public land. The legislation was endorsed by the Department of the Interior, which advised Congress that the legislation "concerns valid and subsisting rights acquired by discovery and location under the mining laws made prior to the enactment of the Mineral Leasing Act. . . ." App. 115-119.

History of the Mountain Boy and Shoup Claims. The Mountain Boy Nos. 6 and 7 and the Harold Shoup Nos. 1, 2, 3, and 4 are contiguous claims of approximately 160 acres each near the southern border of the oil shale deposits in Colorado on the north bank of the Colorado River. An escarpment cuts across each of these claims exposing several hundred feet of oil shale. The claims contain at least 500 continuous vertical feet of oil shale that will yield an average of 15 gallons of oil per ton of rock, or approximately 96 million barrels of oil per 160 acre claim. App. 137. Included within this deposit are about 50 continuous vertical feet that will yield an average of 30 gallons of oil per ton (App. 135), the equivalent of 16 million barrels of oil per 160 acre claim.[13] The lands within the claims have only nominal value as grazing land, on the mesa above the escarpment, and virtually no value for agriculture or any other purpose. App. 121. The climate is arid or semi-arid. *Ibid.*

The claims were located by groups of local residents in 1917 and 1918. The Mountain Boy claims were purchased

[13] As the court of appeals observed, "the Government in these proceedings has acknowledged that these claims met the discovery requirements under the 1916 to 1920 standards applied by the Department. . . . The geology was obviously well known, uncomplicated, and the beds were conspicuous." Pet. App. 5a.

in 1920 by a "business trust" formed by individuals of modest means who together contributed $25,000 in 1920, and additional sums over the next decade, for annual assessment work, which was performed each year, and for the preparation and prosecution of an application for patent, which was filed in 1924.[14] The application was followed by extensive and protracted investigations and adjudications, including decisions in the 1930's that Mountain Boy Nos. 6 and 7 were valid and eligible for patent (*e.g.*, App. 57), but that other claims covered by the application were invalid. Efforts to effect an exchange of lands so as to obtain a contiguous block of patented land proved unsuccessful. During this period ownership of the claims shifted, interested persons died or went into the armed services, and the state of title became confused. In 1945 Interior rejected the application "without prejudice" on the ground that it was not then being vigorously pursued. Ex. C-311-RR; see generally Ex. C-311.

Thereafter Shell Oil Company acquired interests in the claims and caused a second patent application to be filed in 1958, in reliance, among other things, upon Interior's prior determination that the Mountain Boy Nos. 6 and 7 claims were valid. *E.g.*, Exs. C-744; C-745; G-508; G-510. Interior officials in Colorado investigated the claims again and recommended that patent should issue. In 1961 they forwarded the application to Washington for review and preparation of the patent. Exs. C-727; C-756; Tr. 1315-1316. It was at that point that Interior decided that no further oil shale claims would be patented.

The Harold Shoup Nos. 1-4 claims were purchased in the early 1920's by Carl C. Schuyler, Sr., a lawyer in Colorado

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[14] The petitioner's brief errs in stating (p. 58) that "for over 40 years, no patent was sought on respondents' claims." The brief also argues that the supposed inaction reflected the owners' views that the claims were not valuable. *Id.* at n. 31. There is no evidence for that contention and the fact is that the claim owners vigorously, and to the limit of their resources, sought patent and resisted Departmental attacks upon their claims.

who was active in a number of natural resources development projects. He performed annual work on the claims but did not at once apply for patent, concentrating his resources on efforts to develop commercial technology. On the basis of excellent technical recommendations and a market analysis showing that a profit could be made if the price of oil remained over $1.75 per barrel, he began construction in 1920-21 of an oil shale production plant on other unpatented claims in the general vicinity of the Mountain Boy and Shoup claims. However, a fatal accident in the course of construction led to prolonged litigation which, combined with a drastic decline in oil prices, resulted in 1928 in termination of the effort. Exs. C-965; C-971; C-972; C-125.

In that same year 1928 the Shoup claims became an object of a general campaign then being conducted by Interior to determine the validity or invalidity of all oil shale mining claims. This resulted in a thorough field investigation and protracted litigation which terminated in 1935, in favor of the claims. See Exs. C-313; C-874, pp. 47-48. By that time, Schuyler had died and left the claims in trust for the benefit of his family. This trust terminated in 1958, at which time the family formed D. A. Shale, Inc., transferred the claims to it, and caused a patent application to be filed in 1960. Ex. C-971; C-315; G-27; G-28. The application was being processed in Colorado when in 1961 officials in Washington decided to contest all oil shale mining claims for alleged lack of value.

SUMMARY OF ARGUMENT

I

The policy by which the Department of Interior administered the oil shale lands of Western Colorado, prior to its reversal of policy in 1961, accurately reflected the congressional view that oil shale was a valuable mineral capable

of claim location and patent under the mining laws which governed the question prior to enactment of the Mineral Leasing Act of 1920. In the savings clause of Section 37 of that Act Congress directed that that prior law should continue to govern pre-existing valid oil shale claims, and did so in the belief that such valid claims existed.

This congressional understanding was developed over a considerable period of several years prior to 1920, in major part on the basis of representations to the Congress by the Department of the Interior and of congressional reaction to them. Beginning as early as 1913 with investigations by the United States Geological Survey the Department had formulated an affirmative view as to the value and economic significance of the oil shale deposits, reflected in public utterances and publications to that effect, in the classification of oil shale lands (including the lands at issue in this suit) as valuable mineral lands in 1916, in the establishment of Naval Oil Shale Reserves, also in 1916, and in the Department's recommendation to the Congress that because of their value the oil shale lands should be included in the mineral leasing legislation then being considered. The enactment of the Mineral Leasing Act with its savings clause conclusively shows congressional acceptance of these views.

The Department's *Instructions* of May 10, 1920, which formalized the eligibility of oil shale claims for patent under the savings clause of the Mineral Leasing Act of 1920, and the issuance of patent for hundreds of oil shale claims thereafter were thus a consistent and predictable reflection both of the congressional intention manifest in the inclusion of oil shale in the Act and in enactment of the savings clause and also of the Department's well-developed and previously expressed position that oil shale claims could be located under the placer mining law.

The Department decision in *Freeman* v. *Summers,* 52 L.D. 201 (1927), affirming the patentability of oil shale

claims, was thus not an aberration but a consistent reflection of prior Department policy consistent with the congressionally-mandated legislative framework. That that conclusion is correct is underscored by the extensive investigations of Department practice with respect to oil shale which were conducted by both houses of Congress and the Department of Justice in 1930-31, in response to charges of malfeasance that sought to invoke the public suspicion so recently and justifiably aroused in the Teapot Dome scandal. The circumstances in which the Department's practices were reviewed thus lent added weight to the conclusions expressed that the Department's continuing recognition of the value and patentability of oil shale claims properly reflected the law and should not be changed.

On a number of occasions subsequent to 1930, Congress has amended the mining laws in various respects of particular significance for Green River Formation oil shale mining claims. These amendments included various suspensions during the 1930's of the requirement that annual work be done on claims, a matter which at that time was of substantial significance only for oil shale mining claims. Then, in 1956, Congress enacted legislation for the specific purpose of facilitating the patenting of oil shale mining claims in circumstances where a surface patent had been issued and remained outstanding. With the Department's support and recommendation, Congress clearly expressed the understanding that there were, and continued to be, pre-Leasing Act oil shale mining claims that satisfied the discovery requirements of the mining laws. As is the case with the Mineral Leasing Act, the 1956 legislation would have been entirely pointless if, as petitioner urges, there never was a valid oil shale mining claim. The court of appeals thus quite properly held that the Department's long-established practice of regarding oil shale mining claims as eligible for patent reflected the specific understanding and intent of the Congres and that such intent was controlling.

II

As an independent ground for affirmance of the decision below, the claims in suit should be held valid because both at the time of location in 1916-1917 and at the time of patent application and contest in these proceedings the oil shale deposits within the claims constituted "valuable mineral deposits" within the traditional standards of the mining laws. The Department's own evidence at the hearing in this case establishes that the claims have always been valuable, in an economic sense, because of their oil shale deposits and that a commercial-scale operation on the claims in suit, both at the time of location and at the time of patent application, would have yielded a profit. The Department should not be allowed to evade the consequence of these admissions. This is no occasion for the sometimes appropriate concern that the mining laws are being used to obtain lands for non-mineral purposes: the lands within the claims in suit have substantially no non-mineral values, and the Department has not contended that the respondents seek patent on the lands because of non-mineral values or for non-mineral uses.

The classic test, often approved by this Court, defines "value" under the mining laws in terms of reasonable prospects for success in developing a paying mine. The circumstances at the time of location, and at present, clearly justify such expectations. Prior to 1920 the Department itself gave widespread publicity to the mineral richness and economic prospects of the oil shale deposits, which was reinforced by the objective economic factors of that era (and this one) and by the existence elsewhere of commercially successful oil shale industries operating on reserves less rich than those of the Green River Formation. The actions of the Department in classifying the lands in suit as valuable mineral lands in 1916 and in reserving oil shale under 1914 Act patents are consistent only with the

view that the Department itself recognized that the oil shale lands met the mining law requirement of value.

III

The Department's position is that it may repudiate with retroactive effect an administrative rule formalized in 1920 and consistently followed and applied for forty years thereafter with congressional knowledge and acquiescence that oil shale of the Green River Formation was a valuable mineral capable of claim location and patent. A second independent ground for affirmance is that such an administrative *ipse dixit* cannot be allowed to stand. The rule was clearly a permissible construction of the mining law and reflected congressional understanding. The authorities are legion that retroactive repudiation of a long-standing administrative rule is repugnant to profound values entitled to protection. The Department urges in support of its turnabout no more than that its 40 years of prior practice reflected a legal "error," which is wholly insufficient as a basis for the action sought to be defended by the petitioner.

This is not a case where the administrative practice sought to be abandoned has an insubstantial basis or an infrequent application. The rule was developed over the period 1916-1920 in conjunction with the developing consensus in Congress which resulted in the inclusion in the Mineral Leasing Act of lands "valuable" by reason of their oil shale and in the adoption of the savings clause as to previously located claims. The rule was formally promulgated in 1920, applied in the issuance of more than 2,000 patents, in the adjudication of government and private contests and in subsequent rule-making, and was subjected to intensive scrutiny by the Department of Justice and by both houses of Congress in the aftermath of the Kelley charges of corruption and irregularity, and was left unchanged.

IV

As a third independent ground for affirmance, the district court correctly held that the Department was estopped from challenging the claims in suit for lack of value. The Department itself clearly held out both the prospect of profit in commercial operation and the assurance of patent for claims otherwise in compliance with the law and thereby induced effort, investment and reliance. These Department actions and statements were taken and made by the highest officers of the Department acting in the scope of their duties, and were intended to induce the reliance that in fact followed upon them. The circumstances of this case fall well within the bounds of the modern doctrine which holds that the government is subject to the doctrine of equitable estoppel for the authorized acts of its agents within the scope of their duties.

ARGUMENT

I. THE INTERIOR DEPARTMENT'S CONSISTENT RECOGNITION THAT OIL SHALE OF THE GREEN RIVER FORMATION WAS A VALUABLE MINERAL UNDER THE MINING LAWS AND THE SAVINGS CLAUSE OF THE MINERAL LEASING ACT WAS A CONCLUSION ACCEPTED BY CONGRESS IN THE ENACTMENT OF THE MINERAL LEASING ACT, IN ITS REVIEW IN 1930-31 OF THE DEPARTMENT'S PATENTING OF OIL SHALE CLAIMS, AND IN THE ENACTMENT IN 1956 OF LEGISLATION TO FACILITATE OIL SHALE PATENTING.

The theory of the petitioner's case is that the long-standing practice of the Interior Department in recognizing oil shale of the Green River Formation as a valuable mineral deposit within the mining laws was an aberration of which Congress was never effectively made aware and as to which the congressional response has never been more unambiguous than silence. That case is wholly at

war with history. The fact is that the Department's recognition of oil shale value developed in tandem with a congressional appreciation of the same fact, a consensus which is explicit in the legislative history of the Mineral Leasing Act of 1920. The petitioner hardly deals with that legislative history.

The explicit congressional acceptance of oil shale value in 1920 was underscored and confirmed by the thorough investigation conducted by both houses of Congress in 1930-31 in response to charges that precisely focused on the issue which the petitioner would have the Court believe is now a question of first impression: the allegation that the Department was improperly patenting oil shale claims and, in particular, that its standard for discovery on oil shale claims was unauthorized. These charges were reviewed in detail and while remedial legislation on other points was proposed, none was on discovery issues, and the Department was advised by the congressional leaders that it might resume its patenting practice.

The third significant occasion for congressional consideration was the enactment in 1956 of legislation for the precise purpose of *facilitating* the obtaining of patent to oil shale claims.

A. In including "oil shale" within the Mineral Leasing Act and the savings clause therein, Congress expressed its intent that previously located oil shale mining claims, properly initiated upon lands containing substantial deposits of the Green River Formation oil shales, satisfied the discovery requirements of the mining laws.

The basic premise of the general mining statutes enacted by Congress in the years 1866 to 1872 was that the national interest would be served by transferring ownership of valuable mineral deposits in the public domain to the person first discovering them, thus providing a sub-

stantial inducement for the finding of minerals and the resulting benefits to society in their exploitation. This legislation in essence ratified the practices of miners that had grown up during and following the Gold Rush (*see, e.g., Jackson* v. *Roby,* 109 U.S. 440, 441-442 (1883); *Smelting Co.* v. *Kemp,* 104 U.S. 636, 650 (1882); *Jennison* v. *Kirk,* 98 U.S. 453, 457-458 (1879)), and was at variance with prior federal efforts to make mineral lands available only by leasing. *See* P. Gates & R. Swanson, History of Public Land Law Development 699-723 (1968). Substantial objections to this philosophy arose around the turn of the century, however, when the presence of valuable deposits of minerals, particularly oil, became known prior to the initiation of mining claims.[15] Such knowledge was developed by and large in two ways. One was the successful completion of exploration (for example, the drilling of one or more oil wells) on an unpatented mining claim in geologic circumstances which indicated the certainty or at least the very high probability that the mineral also underlay adjacent areas not yet covered by mining claims. The other way in which such knowledge was developed was through the field explorations and published reports of the United States Geological Survey concerning the geographic extent and richness of various minerals, including phosphate, sodium, and, in the period beginning in 1913, the oil shale of the Green River Formation.

The general response of the Executive Branch to the development of such knowledge was to withdraw the lands known to be valuable for minerals from location under the mining laws, and to do so by executive action. Substantial controversy arose as to the propriety of such executive action, but in 1915 this Court upheld the withdrawals.

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[15] The petitioner's brief notes, p. 26, that Congress became "dissatisfied with the general mining law as it applied to oil and certain other minerals," but neglects to note the obvious reason: that the minerals were too valuable, were known to exist, and should be retained by the Government.

United States v. *Midwest Oil Co.*, 236 U.S. 459 (1915). While an executive withdrawal could thus preclude utilization of a particular mineral deposit pursuant to the mining laws, it did not and could not provide any alternate means of development. To reach a congressional consensus on an alternate required virtually all of the years of the two Wilson Administrations, during which successive Congresses conducted extensive hearings on various leasing proposals, a process that culminated in enactment of the Mineral Leasing Act of 1920. See pp. 7-10, *supra*. This consensus, of course, had to be acceptable not only to the Congress but also to the Executive Branch, in which the Departments of Justice, Interior, and Navy played large roles.

It was in this context that such a consensus was reached with respect to the oil shales of the Green River Formation. From the standpoint of the Department of the Interior, it is significant that the Department itself had concluded in 1916 that the oil shales were valuable mineral lands and had so classified them. The basis for the classification was the conviction that sooner or later the oil yield potential of the Green River Formation would be of commercial importance to the nation. *E.g.*, App. 9-11, 13-14.

Classification was a definitive statement by the Department that the lands involved were valuable within the meaning of the mining laws. The basic purpose of classification, such as the 1916 classification of oil shale, was to determine whether lands should be disposed of under the agricultural land laws or the mining laws.[16] As the Department had ruled in *Samuel D. Pulford, et al.*, 45 L.D. 494

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[16] It was the contemporaneous view of the Geological Survey that in classifying lands pursuant to its organic Act of March 3, 1879, 20 Stat. 377, 394, 43 U.S.C. 31(a), it was to carry out "the plain intention of Congress that the public lands shall be classified and that they shall be disposed of in accordance with their classification." U.S.G.S. Bulletin 537, *The Classification of Public Lands* 20 (1913); Ex. C-996.

(1916), the classification of lands containing coal as mineral lands was proper only if the lands contained coal "of such quality and in such quantity as reasonably to warrant the conclusion that they are capable of being profitably mined or worked. . . ."[17] Also pertinent is the contemporaneous summary:

> ". . . public lands . . . are of but two classes, mineral lands and non-mineral lands. In the west, the former can be legally entered under only the mineral land laws; the latter under only the non-mineral or what may be broadly termed the agricultural land laws." *United States v. Kostelak,* 207 Fed. 447, 450 (D. Mont. 1913).

Accord, Diamond Coal & Coke Co. v. *United States,* 233 U.S. 236, 239-40 (1914); *Davis's Administrator* v. *Weibbold,* 139 U.S. 507, 519, 523-24 (1891); *United States* v. *Clare Williamson,* 75 I.D. 338, 344 (1968).[18] To the same effect is

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[17] Classification as mineral lands was not conclusive vis-a-vis members of the public. As *Pulford* suggests, one who disagreed with a classification had the burden of showing that the lands were not valuable for minerals. *See, e.g.,* App. 53-54. It was the fact of mineral value, rather than classification, which was truly determinative of whether the lands could be disposed of under the agricultural laws rather than the mining laws. Until the classification was changed, however, it was binding upon the Department and served to guard against inadvertent issuance of homestead patents by the General Land Office. It was for this reason that the 1916 classification of Green River Formation oil shales was noted on the tract books of the local land offices. App. 13-15. On its own initiative the Department from time to time amended the 1916 classification, when further studies showed that certain lands contained "insufficient mineral value to warrant this classification . . . ." App. 43.

[18] The Mineral Leasing Act of 1920 has been construed as having created a third category of lands—those which are not presently valuable for minerals, but are valuable enough for prospecting so as not to be appropriate for agricultural entry. *See, e.g., Blakeney* v. *Womack,* 51 L.D. 622, 624 (1926). This construction is derived from the Act's then novel provision for prospecting permits for certain minerals. The Act did not provide for prospecting permits for oil shale, no doubt in reflection of congressional understanding that the lands containing oil shale had already been defined and that prospecting was therefore unnecessary.

this Court's observation in *Burke* v. *Southern Pac. R. R.*, 234 U.S. 669, 677 (1914) that:

> "In the legislation of Congress, the term 'mineral lands' is not confined to railroad grants. It occurs in the mining laws, in an excepting clause in the homestead law, and in like clauses in other public land laws. *Evidently it has the same meaning in all.*" (Emphasis supplied.)[19]

The 1916 classifications thus amounted to a formal declaration by the Department that the classified lands were valuable within the meaning of the mining laws. This view was expressed contemporaneously in internal Department communications and also in statements to members of Congress and the general public. *E.g.*, App. 13-15, 19-22, 25 ("Large areas . . . have been classified . . . as mineral land valuable for oil shale.")

In making the 1916 oil shale classifications, the Department deliberately chose not to follow the then conventional practice of withdrawing valuable mineral lands from entry under the mining laws. It did so for the stated purpose of inducing private efforts to develop an oil shale industry. *E.g.*, App. 14. Consistent with the tenor of the times, Interior's practical judgment was that the development of a commercial shale oil industry would be in the national interest, that the private sector should be counted upon to develop that industry, but that the private sector would not

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[19] The petitioner's brief erroneously suggests, p. 19, n. 5, a difference between the value required for discovery to perfect a mining claim and the value required for classification as mineral land. There is no difference in value, and the Department explicitly stated that the 1916 classification evidenced "the value of the lands so classified for mining purposes." App. 53-54. The difference between the two lies in the fact that for discovery an actual physical finding of minerals is required, as distinct from knowledge that lands are underlain by valuable minerals. *See, e.g., Diamond Coal and Coke Co.* v. *United States*, 233 U.S. 236 (1914); App. 102 (Ex. C-157).

be willing to undertake the cost and effort of development unless it could obtain under the mining laws oil shale reserves sufficient, when commercially exploited, to justify the development effort. Interior recognized that supply and demand conditions and the existence of successful oil shale industries abroad gave reasonable prospects of the development here of a commercial domestic oil shale industry, but also that such development was indefinite and uncertain. It is not without its irony that the Department now contends that this very uncertainty should have had the effect of denying the status of "valuable" to the oil shale of the Green River Formation. The Department's contemporaneous view, however, was that the Green River Formation oil shales met the classic test of value under the mining laws.

It was thus altogether expectable that when in 1918 oil shale claim owners became concerned about the effects of possible inclusion of oil shale lands within the mineral leasing bill upon the patentability of their claims (App. 28), the Department would take the position that oil shale claims initiated prior to the effective date of the leasing act would continue to be eligible for patent. Further, one may surmise that when, in February 1918, the oil shale claim owners obtained a hearing with the Department on this matter, the Department was pleased to learn that a potentially significant source of opposition to the leasing bill (the oil shale claimants and the Colorado, Utah, and Wyoming delegations represented at the Interior Department hearing, *e.g.*, App. 76), would be satisfied by the Department's assurances, which were then given, that existing oil shale mining claims would be respected and would continue to be eligible for patent.

The Department was represented at the 1918 hearing by a number of senior officials, including First Assistant Secretary Vogelsang, E. C. Finney, the Department's chief law officer, Dr. George Otis Smith, Director of the Geological

Survey, Dr. Van H. Manning, Director of the Bureau of Mines, and Clay Tallman, Commissioner of the General Land Office. App. 72. The meeting explored whether oil shale mining claims would be regarded as patentable and what the Department's attitude was toward private efforts to develop a shale oil industry. The Department exhibited "a very friendly interest in the development of the shale." App. 73. The Department also indicated that it would recognize the validity of prior claims, and it was agreed that Mr. Finney and attorneys for the claimants would together draft a savings clause "that would except these claims from the operation of the leasing law." App. 71-74, 76-77, 105-106.

At the urging of Department officials and the congressional delegations, essentially the same presentation that had been made to the Department was made a few days later at the House hearings. *Hearings Before the House Committee on the Public Lands, Oil Leasing Lands,* February 26, 1918, 65th Cong. 2d Sess., excerpted in Ex. G-384; App. 25-37, 76. The chief spokesman for the oil shale claimants at the House hearing was Colorado State Geologist Prof. R. D. George. He noted at the outset that the presentation being made had been made at the Department some days previously and that the Department had requested the claimants to make the same presentation to the Committee. App. 26. He emphasized that his group wished to obtain the Committee's judgment on either leaving the infant oil shale industry where it was "under the present mining laws and the present Departmental regulations," or the "speedy enactment of such legislation as may be necessary to foster, safeguard, and establish" an oil shale industry, and observed that "any delay in determining the rights and privileges of those who are engaged in the shale oil industry will militate against the growth and establishment of that industry." App. 26-27. He reviewed the increasing demand and rapidly increasing prices for petroleum products and the potential for the development of a shale oil industry.

He expressed the view that a successful oil shale industry could be developed given proper management, the achievement of economies of scale and a continuation of favorable economic trends. He also reviewed the efforts of the Department to encourage the development of an oil shale industry, including its assurances that mining claims located on Green River Formation oil shale lands were regarded as eligible for patent. He urged the Committee, if it recommended legislation, "to provide specifically for all those who had gone on and made their locations in an honest and sincere effort to develop the industry. Nothing should be done which could in any way impair their initiated rights." App. 32. Congressman Taylor, who represented the oil shale district in Colorado and was a member of the Public Lands Committee and a member of the Conference Committee on the Mineral Leasing Act of 1920, strongly supported George, noting that the Director of the Geological Survey had authorized him to assure his constituency that there would be no more withdrawals of oil shale land than had been made for the Naval Oil Shale Reserves. App. 32. He stated that the senior Department officials had

> "for years, been urging these men to do this very thing, to locate and patent these shales under the placer law, and we do feel that, backed up with all of their letters and encouragement and classification, at my specific request, and all of their publishing to the world to the effect that 'We won't make any more withdrawals of shale land; go ahead and develop them if you can, and patent them under the placer law,' we do not believe they will now repudiate their actions and turn down these people who are following their specific and direct instructions right along . . . [T]hese high officials will not welch on their own representations and instructions. Since talking with those gentlemen I believe if that kind of a provision is put in this bill it will be scrupulously recognized and en-

> forced, and all those people who strictly comply with the law will get a patent. . . ." (App. 37; *see generally* App. 26-37, and Ex. G-384, excerpts of the 1918 House hearings.)

The House Committee proved receptive to this approach, and the Department advised the oil shale contingent that it would not be necessary to repeat the presentation to the Senate Public Lands Committee. App. 76. The House Committee then reported out amendments to the bill (S. 2812) that had been the subject of the hearings, including the addition of valuable "oil shale" lands to the mineral lands to be leased in the future and including also a savings clause, proposed as Section 28 of that bill. The "oil shale" amendment was offered on the House floor by Congressman Raker for the Committee, who stated

> "The gentleman from Colorado [MR. TAYLOR] should have offered this. It is an oversight in the printing. It is the gentleman's amendment offered in the committee."

The Clerk then read an amendment adding "oil shale" after "oil", whereupon Congressman Taylor stated, "We will accept that amendment. . . . [R]epresenting as I do the State and county having more oil shale than all the other States combined, we accept that amendment." Congressman Raker then stated "It belongs there; and after the committee adopted Section 28, of course it should go in there." 56 Cong. Rec. 7033 (May 24, 1918).

Congressman Raker's comment underscores the key inter-relationship between the addition of "oil shale" to the Leasing Act, proposed by Congressman Taylor who was surely sympathetic to his constituents, and the savings clause, which Congressman Raker explained to the House as "another important feature that has been added . . . which protects those who have initiated claims upon the

public domain. . . ." (*Ibid.*) As Raker later explained, the addition of "oil shale" had been

> "one of the special provisions in the bill that has been given more careful consideration by the committee, and especially by a subcommittee consisting of Senator LENROOT and myself, who spent much time on it. The committee had many conferences, and it is one vital to legislation of this kind, because it repeals all the laws relating to the subject in hand. The purpose was to protect those who had valid claims. I believe that this repealing clause does that. . . ."[20]

The petitioner's argument depends upon the proposition that "oil shale" was added by Congress to the list of leaseable minerals even though not "valuable." The Congress, however, was more precise, and the argument is baseless. Oil shale as such was not set aside for leasing; only oil shale deposits in "lands valuable" for oil shale were reserved for leasing. 56 Cong. Rec. 7104 (May 25, 1918); Mineral Leasing Act of 1920, Section 37, Ch. 85, 41 Stat. 451, 30 U.S.C. 193.[21] If there were not, as the peti-

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[20] *Id.* at 7105 (May 25, 1918). Congressman Raker's remarks and other floor discusion also make clear that the savings clause was intended to protect persons who had invested substantial amounts in drilling for oil, but had not yet struck oil at the time an executive withdrawal had been made or the Leasing Act had gone into effect. The proposed savings clause in Section 28 (*id.* at 7104) spelled out precisely how much an oil driller would have been required to have spent to be protected. These lengthy provisions were telescoped in the final savings clause, Section 37 of the Mineral Leasing Act of 1920, into the phrase "including discovery" after the phrase "which claims may be perfected under such laws". This point is important here only because the petitioner's brief erroneously appears to suggest (p. 27) that "including discovery" reflected some uncertainty whether Congress thought that oil shale was valuable. That is not the case; "including discovery" referred to bona fide claims on which minerals had not yet been found. *E.g.*, 58 Cong. Rec. 4584 (August 30, 1919).

[21] Similarly, Interior did not regard all oil shale deposits as patentable; lands containing oil shale were patentable only "if valuable." The petitioner's brief (p. 28) errs in implying that the Department's reference to the value requirement in advising the public about the mining laws (*e.g.*, App. 33-34), meant that no oil shale was valuable.

tioner now contends, any lands "valuable" because they contained oil shale, the set-aside for oil shale leasing was, and is, entirely nugatory.

As Congressman Raker's comment quoted above shows, the Senate had been appropriately consulted and had agreed to the addition of "oil shale" in lands valuable thereby, and the savings clause. Since the Department of the Interior and oil shale claimants supported these additions, the inclusion of oil shale within the Mineral Leasing Act was not subsequently the subject of any legislative controversy or even extended public discussion.[22] The congressional references to oil shale in 1919 and early 1920 were all consistent with the patentability of prior claims and reflected an awareness that a commercial industry lay sometime in the future. *E.g.*, App. 45-48; 58 Cong. Rec. 4271-72 (remarks of Senator Smoot) (Aug. 25, 1919). Typical are the remarks of Representative Sinnott on the House floor on February 10, 1920, 57 Cong. Rec. 2709:

> "[T]he bill is practically the same as it passed the House last October. It is also modeled on the bill that passed the House at the last session and the session before and the session before.
>
> "In brief, the bill does away with and repeals the present laws providing for the patenting and the absolute disposal by the Government of the mineral resources named in the bill. This bill is strictly a leasing bill. No longer can patents be issued deeding away these mineral resources of the Government, except as

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[22] In reporting the amended bill to the House, the Chairman of the Public Lands Committee, Congressman Ferris, stated "The bill as it stands has the support of the Public Lands Committee, as well as the support of the three departments—the Department of Justice, the Navy Department, and the Interior Department. . . ." 56 Cong. Rec. 6982 (May 23, 1918). The Committee's Report (No. 563, 65th Cong., 2d Sess., May 14, 1918), which discussed oil shale at length, appears in the 1918 Congressional Record at pp. 6984-87.

> to some valid claims now existing upon mineral lands provided for in section 37 of the bill. But apart from that, no longer will . . . oil shale . . . be deeded away by the Government."

Congressman Taylor of Colorado, who had actively participated in the key 1918 oil shale hearings before the Department and the House Committee, served as one of the House Conferees. See H. Conf. Rep. No. 600, 66th Cong., 2d Sess. (Feb. 6, 1920). He stated at the 1926 rulemaking hearing in *Freeman* v. *Summers,* conducted by Secretary of the Interior Work (see pp. 69-70, *infra*), that

> "As a member of the Public Lands Committee of the House I helped to pass that provision of the leasing law, section 37 of the act of February 25, 1920, compelling, as us Members of Congress then thought, the Interior Department to recognize and administer the mining law as it existed and was construed up to and at that time, and to recognize the rights of the people who had made [oil shale] locations in good faith under the mining statutes at that time." (Ex. G-729, pp. 107-108.)

The testimony of former Senator Thomas, also of Colorado, at House hearings in 1931 on the Ralph Kelley charges likewise demonstrates the understanding of Congress in extending the Mineral Leasing Act to oil shale, with the savings clause, that there were valid oil shale claims and the intention of Congress to protect them from just that sort of administrative *volte-face* represented by the present controversy.

> "I was a member of the Committee on Public Lands of the Senate during the consideration of that bill [Mineral Leasing Act], and Members of the Senate from the Rocky Mountain States were during that time besieged, in person, by wire, and by letter, to at all hazards protect their undeveloped and uncompleted locations of shale land from the operation of the bill. I think the

same was true with gentlemen then forming the House Committee. The chairman of your committee at that time so informed me; and therefore one of the outstanding purposes and objects of those representing that section [37] was to safeguard these inchoate rights which were then supposed to be in jeopardy.

"The result of those appeals and of our efforts was that exception which was designed to keep those claims under the law of their origin. . . . it was our intention that they should occupy the same position in the mining law of 1872 after the leasing act was passed that they would have occupied if no leasing act had ever been passed. And I may add that if we had had the remotest idea that the exception was not to be so administered, the bill would never have been passed." (Ex. C-320, pp. 124-125).

The record of Congressional consideration of the inclusion of oil shale in the Mineral Leasing Act, in the context of the savings clause, compels the conclusion that Congress determined that lands of the Green River Formation containing substantial oil shale deposits satisfied the discovery requirements of the mining laws and that pre-Leasing Act claims on such lands were valid and eligible for patent. The Department's latter-day construction that no Green River Formation oil shale claim ever was eligible for patent cannot be squared with that intention.

Extensive citation of authority is hardly necessary for the proposition that in the construction and application of federal statutes it is the intent of Congress that is controlling. It should not go unmentioned, however, that the contemporaneous and undoubtedly well-informed view of the Department was that the inclusion of oil shale within the Mineral Leasing Act, coupled with the savings clause, was indeed a congressional recognition of the value and patentability of oil shale. The Department had occasion to record its views on these matters when General Land Office officials forwarded to the secretarial echelon the first

oil shale patent application, noting in an April 20, 1920, memorandum (App. 48-49) that many oil shale placer claims had been initiated, "some in good faith, probably more otherwise," that "discovery is easy as to those claims that are located along the outcrops" (which is the case for the Mountain Boy and Shoup claims at issue here), and cautioning that "if we patent any oil shale placer claims, the Leasing Act will be a dead letter as to oil shale for some time." The memorandum also stated that the (promptly promulgated) oil shale leasing regulations, 47 L.D. 424, had been "designed not to admit the existence of such a thing as a valid claim under the placer laws," the same view that the Department now urges. The Department's response, however, was its *Instructions* of May 10, 1920, 47 L.D. 548, App. 49-54, adhering to the Department's prior view that oil shale was valuable and patentable.[23] The *Instructions* cited as a basis for this conclusion the 1916 classifications and the savings clause of the Mineral Leasing Act, which were characterized as recognition of oil shale "by the Department and by Con-

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[23] The petitioner attempts to evade the force of the *Instructions* by fastening on the words "if valuable" in the phrase in the *Instructions* referring to previous Department statements in which the Department had "declared itself as favorable to the view that such deposits, if valuable, are subject to location and purchase under the mining laws." See Brief, p. 28. This obviously did not mean that the Department did not have an affirmative view as to the value of the oil shale deposits of the Green River Formation; the whole history of the inclusion of oil shale in the Mineral Leasing Act belies that. The prompt issuance of patent on the application which had occasioned the *Instructions* confirms that the meaning of the *Instructions* was neither unfavorable to the value of oil shale nor ambiguous. What the *Instructions* meant by this reference to "if valuable," and what the Department continued thereafter to insist on, was the necessity for a showing in any particular case that a claim presented for patent did in fact contain the rich oil shale measures of the Green River Formation as distinct from the marginal beds below the rich zone. The record below shows examples of the rejection of the validity of claims in such cases. *E.g., United States* v. *Bailey,* Contest 3215 (June 22, 1923), holding that those portions of the claims in contest below the 6,400-foot contour line were "non-mineral in character" and were to be eliminated from the claims. Ex. C-363.

gress as a mineral deposit and a source of petroleum." App. 53-54. If there were otherwise any doubt as to the intent of Congress, this contemporaneous administrative construction would be entitled to significant weight. *F.H.A.* v. *The Darlington, Inc.*, 358 U.S. 84, 89-90 (1958); *United States* v. *Leslie Salt Co.*, 350 U.S. 383, 396 (1956); *United States* v. *Wyoming*, 331 U.S. 440, 454 (1947); *Brennan* v. *Udall*, 251 F.Supp. 12, 23 (D. Colo. 1966), *aff'd*, 379 F.2d 803 (10th Cir.), *cert. denied*, 389 U.S. 975 (1967).

B. Congress further expressed its understanding and intent that pre-Leasing Act oil shale claims were eligible for patent when in 1930-1931 it reviewed the first decade of the issuance of oil shale patents and signified its expectation that such patenting would continue.

As the petitioner's brief recognizes (p. 31), the occasion for congressional review of the first decade of the patenting of oil shale claims was a series of fourteen articles which appeared in the *New York World* in October 1930 written by a disgruntled Interior field official, Ralph S. Kelley, whose charges raised the spectre of Teapot Dome with respect to such patenting.[24] The nature of Kelley's

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[24] Petitioner's brief (p. 31, n. 10) makes a point of noting that E.C. Finney, who drafted the *Freeman* v. *Summers* decision, had been Assistant Secretary under Secretary of the Interior Albert B. Fall at the time the Teapot Dome leases were issued. The petitioner apparently suggests guilt by association twice removed: Fall was guilty, therefore Finney should be deemed guilty, and therefore *Freeman* v. *Summers* should be deemed a corrupt decision. In fairness to Finney, it should be noted that he was a career Department official, who formerly had been a judge, that he had been active throughout the Wilson administration in recommending that oil shale be included within the Mineral Leasing Act (*see, e.g.*, App. 9-10, 72), and that it was he who directed the Commissioner of the General Land Office in 1927 (the year *Freeman* v. *Summers* was decided) to make a thorough investigation of all oil shale locations of record, so that, with the ample evidence then available that might not be available later when patent applications were sought, the Department could accurately ascertain which claims were valid and which were not. App. 58-59. Those investigations led to the assertion of Departmental challenges to thousands of oil shale claims, many for alleged defaults in performance of annual assessment work but also many for additional charges. App. 106-107, 100-101, 103-104.

charges and the obvious partisan interest of Democrats such as Senator Walsh in bringing to light any impropriety in the patenting of oil shale lands caused senior Interior Department officials to demand a complete and thorough investigation, so as to obtain "clearance" for their conduct, and these circumstances led Senator Walsh and his congressional colleagues to make searching inquiries. The charge of "Teapot Dome Revisited" set the stage for one of the most thorough congressional reviews of administrative practice ever conducted, a review which focused in particular on Department practices and rulings concerning discovery and the consequent patenting of oil shale claims.

Thus, in November 1930, Secretary Wilbur wrote to the Chairmen of the Public Lands Committees of the House and the Senate, in part about legislative clarification of questions relating to assessment work on oil shale claims,[25] but noting that those questions were

> "only part of the general problem as to the oil shale lands, and it may be that other phases of it not now covered by legislation, such as the question of discovery . . . will impress you as requiring legislative definition." App. 71.

In his testimony on the first day of the Senate hearings, Secretary Wilbur personally requested that the Committee conduct a full investigation of Kelley's charges, stating "We feel that we should have clearance in the Senate," to which Senator Walsh replied "Absolutely." App. 89.

The investigation by Senator Walsh proceeded pursuant to Senate Resolution 379, which charged the Public Lands Committee to investigate Kelley's charges and

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[25] Assessment work was then in controversy as a result of the Department's efforts to limit the effect of *Wilbur* v. *Krushnic*, 280 U.S. 306 (1930). *See Ickes* v. *Virginia-Colorado Development Corp.*, 295 U.S. 639 (1935); App. 101.

> "the practices, rulings, and actions of the Department of the Interior in relation to the preservation or disposition of such [oil shale] lands, or of applications for patent to the same, and to make such recommendations as to it may seem appropriate touching needed legislation or other Governmental action for the recovery of any such lands . . . or for a review of any final award by the Secretary of the Interior of any such lands." App. 87-88.

The reference to "recovery" of oil shale lands which had been patented and to "review" of final awards by the Secretary of any such lands was no idle threat. One consequence of the congressional inquiry into Teapot Dome had been the institution of litigation to cancel the oil leases in question,[26] and had the Committee concluded that oil shale patents had been wrongly awarded, suits to cancel patents within the six-year statute of limitation would have afforded a large measure of relief, if successful,[27] and would have established legal doctrine for the future.

Senator Walsh, whose thorough probing had uncovered the Teapot Dome scandal, took the lead in the investigation, stating at the outset that Kelley's charges "center very largely about this so-called Freeman-Summers case." App. 89. Senator Walsh reviewed that case in detail, questioning Solicitor Finney, the author of the decision, at length. The hearings documented Interior's consistent application of the 1920 *Instructions* in patenting oil shale claims from 1920 to 1930. *See 1931 Senate Hearings* (Ex. G-729) 14, 24-27, 211, 213, 341. Interior explained that even though oil shale

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[26] *See* the Joint Resolution, approved February 8, 1924, authorizing and directing litigation to cancel the leases. 43 Stat. 5.

[27] 43 U.S.C. 1166, 26 Stat. 1093 (1891). Of the 1,177 oil shale claims which had been patented through 1930, 673 were then within the six-year period. *See* Exs. C-190 and G-104.

could not then be worked at a profit, the *Freeman* v. *Summers* decision had been an application of the classic prudent man test,[28] which occasioned the comment by Senator Walsh that he understood "perfectly well" the basis for the decision. App. 96-97. In contrast, Ralph Kelley failed in his testimony to establish any wrongdoing on Interior's part, and his credibility was severely impeached when it was brought out that he had written the newspaper articles for his own personal financial profit while still in the Department's employ, and that he had misrepresented to his superiors the state of his health so that he could absent himself from his official duties to pursue the preparation of the articles and to arrange for their publication. App. 99; *1931 Senate Hearings* (Ex. G-729) 287-351.

The outcome of the hearings was not only that the Committee made no recommendation for any change in Interior's practices, or for any effort to reclaim any lands, but also that the Committee authorized the Department to resume the processing of pending patent applications, which had been suspended following publication of Kelley's charges. Shortly following the hearings, Secretary Wilbur wrote to Senator Nye, Chairman of the Senate Committee, apparently reiterating his request for "clearance," to which Senator Nye responded, "I have conferred with Senator Walsh and beg to advise you that there is no reason why your Department should not proceed to final disposition of the pending application for patents to oil shale lands in conformity to the law." App. 103. The Department had previously indicated its expectation that in conformity to the law additional patents would issue.[29] While Senators Nye and Walsh did not, of course, indicate that

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[28] *Accord,* Ex. G-522, March 2, 1921, Letter by First Assistant Secretary Vogelsang. App. 56.

[29] Secretary Wilbur stated in the Senate Committee hearings that, "Any oil-shale claimant who complies wtih the law can expect his claim to go to patent uninfluenced by any hysteria arising from Mr. Kelley's statements." *1931 Senate Hearings* 215; *see also id.* at 213, 341.

any particular claims should go to patent, one could hardly imagine a more explicit statement of congressional intent approving in principle the continued patenting of Green River Formation oil shale claims.

The House hearings, which had begun prior to the Senate hearings but continued after them, also included testimony from Secretary Wilbur and Ralph Kelley. The House Report recommended no change with respect to discovery,[30] but called for modifications of the mining laws, with respect to oil shale claims only, to require performance of assessment work, to provide protection to bona fide purchasers against charges of fraudulent initial location, and to provide that any oil shale claim for which patent was not applied by July 1, 1934, would be deemed abandoned. H.R. Rep. No. 2537, 71st Cong., 3rd Sess. (Ex. C-380). It is obvious that these recommendations reflected an understanding that valid oil shale mining claims existed and that the Committee expected Interior's past practices with respect to discovery to continue. This conclusion is reinforced by the fact that the House report included mention that one of the questions that had been presented to the Committee by Secretary Wilbur was "What shall be done with questions of discovery?" App. 81. The report concluded that its recommendations for limited changes in the mining laws would provide guidance "necessary, proper, and advisable for the final disposition of the questions affecting oil shale lands." *Ibid.*

As the petitioner notes, the House report did not result in legislation. The important point, however, is that the Committee clearly disclosed the understanding and intent that patenting of oil shale claims would continue, and

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[30] The Report, excerpted at App. 80-84, noted that the Mineral Leasing Act had "entirely changed" the public land policy of the United States "as to all lands valuable for oil shale," but that the savings clause had excepted prior valid claims. App. 80.

would continue indefinitely unless its recommended time limit were enacted. Had the Committee shared the petitioner's view that oil shale was not "valuable" and that no oil shale claim had ever been valid, it would hardly have recommended legislation requiring oil shale claimants to file patent applications. As for actual legislation, Congress did on several occasions in the 1930's and thereafter amend the mining laws so as to suspend the annual assessment work requirements,[31] a matter then of substantial controversy with respect to oil shale mining claims. *See, e.g.,* App. 101; *cf. Ickes* v. *Virginia-Colorado Development Corp.,* 295 U.S. 639 (1935).

Congressional acquiescence in a well-established administrative practice known to the Congress is to be taken as an indication of congressional approval which is not to be thereafter disregarded by administrative agencies. Where, as is the case here, Congress has intensively investigated an administrative practice and through its Committees endorsed that practice, the same conclusion is even more compelling. That conclusion is still further reinforced by the fact that Congress since 1930 has amended the mining laws on several occasions without making or suggesting any change with respect to the Department's practice of recognizing as valuable the oil shale deposits of the Green River Formation. *E.g., Saxbe* v. *Bustos,* 419 U.S. 65, 74 (1974) ("longstanding administrative construction is entitled to great weight particularly when . . . Congress has revisited the Act and left the practice untouched."); *Fribourg Nav. Co.* v. *Commissoner,* 383 U.S. 272, 283-284 (1966)

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[31] Act of June 6, 1932, 47 Stat. 291, *as amended* 474; Act of May 18, 1933, 48 Stat. 72; Act of May 15, 1934, 48 Stat. 777; Act of June 13, 1935, 49 Stat. 337; Act of April 24, 1936, 48 Stat. 1238; Act of June 24, 1937, 50 Stat. 306; Act of June 29, 1938, 52 Stat. 1234; Act of May 7, 1942, 56 Stat. 271; Act of May 3, 1943, 57 Stat. 74; Act of June 17, 1948, 62 Stat. 475; Act of June 17, 1949, 63 Stat. 200; Act of June 21, 1949, 63 Stat. 214.

(reenactment of depreciation provisions of the tax law precluded change in administrative construction); *Zemel* v. *Rusk*, 381 U.S. 1, 12 (1965) (1952 reenactment of the 1926 Passport Act held to confirm practice of issuing passports with area restrictions, although the legislation did not relate to that question); *Udall* v. *Tallman*, 380 U.S. 1 (1965); *United States* v. *Leslie Salt Co.*, 350 U.S. 383, 396-97 (1956) (the Commissioner of Internal Revenue held precluded from altering a long-continued practice "that . . . has had both express and implied congressional acquiescence, through the 1918 amendment to the statute which has ever since continued in effect, and through Congress having let the administrative determination remain undisturbed for so many years"); *NLRB* v. *Gullett Gin Co.*, 340 U.S. 361, 366 (1951) (reenactment without change of provisions of the National Labor Relations Act); *Norwegian Nitrogen Products Co.* v. *United States*, 288 U.S. 294, 313 (1933) ("Acquiescence by Congress in an administrative practice may be an inference from silence during a period of years"); *United States* v. *Midwest Oil Co.*, 236 U.S. 459, 474, 481 (1915); *United States* v. *Philbrick*, 120 U.S. 52, 58-59 (1887) (regulations of the Secretary of the Navy sustained where the power had "been frequently exercised . . . without objection by the legislative branch of the government"); *Brennan* v. *Udall*, 379 F.2d 803, 806 (10th Cir.), *cert. denied*, 389 U.S. 975 (1967).

This case is wholly unlike cases such as *TVA* v. *Hill*, 437 U.S. 153 (1978), and *SEC* v. *Sloan*, 436 U.S. 103 (1978), upon which the petitioner relies. They stand only for the proposition that plain statutory language will not be disregarded on the basis of subsequent statements within Congress of a contrary interpretation of a statute. Here there is no conflict whatsoever between congressional approval in 1930-1931 and subsequent years of continued patenting of oil shale claims, on the one hand, and the congressional decision, in enacting the Mineral Leasing

Act, to include oil shale and to preserve previously initiated oil shale mining claims as eligible for patent, on the other. Nor is there any conflict with any other expression of congressional intent. Quite the contrary, each such expression supports the congressional intent expressed in the early 1930's.

C. The enactment in 1956 of legislation to facilitate the issuance of oil shale patents further confirmed and expressed the understanding and intent of Congress that pre-Leasing Act mining claims within the Green River Formation were eligible for patent insofar as discovery requirements were concerned.

Under the authorities just cited, pp. 44-45, *supra,* the congressional intention manifest in the Act of July 20, 1956, 70 Stat. 592, 30 U.S.C. 122, would suffice to foreclose the Department's attempt to repudiate the patentability of oil shale claims, even if it were the only indication of congressional intent. As noted above, pp. 16-17, the 1956 legislation was clearly motivated by a congressional desire to facilitate the patenting of pre-Leasing Act oil shale mining claims, a silly objective, indeed, if the Department's current position should be upheld, that no oil shale mining claim has ever been eligible for patent.

The petitioner attempts to evade the significance of the 1956 legislation by asserting that the subject of discovery was not extensively discussed, but that is not persuasive because there of course comes a time when a practice and a congressional understanding are so firmly fixed that there is no occasion to start a discussion from first principles. While Congress had no occasion to discuss discovery requirements at length, discoverability and locatability of oil shale was taken for granted, for surely those participating in consideration of the 1956 legislation understood that there were such things as pre-Leasing Act oil

shale mining claims within the Green River Formation that satisfied the discovery requirements of the mining laws and that were eligible for patent, in accordance with the long-established uniform practice of the Department dating from at least 1920. These participants included not only members of the Congress, including Chairman Wayne Aspinall of the House Interior Committee whose district included many oil shale mining claims, but the Department of Interior itself, which endorsed the legislation.[32] The Department explicitly informed the Congress that the patenting of oil shale mining claims was continuing, 67 such patents covering approximately 85,000 acres in Colorado having been issued between 1946 and 1955 (App. 117), and that the legislation was intended "to clear up" a problem concerning "valid and subsisting rights acquired by discovery and location under the mining laws prior to the enactment of the Mineral Leasing Act of February 25, 1920...." App. 119.

How Congress could more clearly have signified its continuing intent and understanding that oil shale claims were eligible for patent, petitioner does not state. Petitioner asks this Court to sustain petitioner's defiance of congressional intent, clearly expressed over the period from 1918 to 1956.[33] Yet, as the petitioner acknowledges, the responsibility to determine the disposition of public lands is vested in Congress. Respondents request no more than that this Court respects the manifest intent of the Congress.[34]

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[32] The legislative history is excerpted at App. 115-120.

[33] To justify such defiance, the petitioner's brief (p. 61) stresses the great value of oil shale, hardly a principled basis for concluding that oil shale is not valuable or that Congress has never recognized its value.

[34] As the court of appeals concluded, "the changes here sought to be made by the Department as to 1920 standards incorporated into the mining laws are well beyond executive authority." Pet. App. 18a-20a.

II. THE GREEN RIVER FORMATION OIL SHALE DEPOSITS WITHIN THE MOUNTAIN BOY AND SHOUP CLAIMS SATISFY THE VALUE REQUIREMENTS OF THE MINING LAWS, AS OF BOTH THE TIME OF LOCATION AND THE PRESENT.

The undisputed testimony of Interior's own witnesses established that the Mountain Boy and Shoup claims contain extensive deposits of Green River Formation oil shale. These deposits include between 500 and 600 continuous vertical feet of oil shale that will yield an average of 15 gallons of oil per ton ("GPT")—some 600,000 barrels of oil per acre, or 96,000,000 barrels per 160 acre claim. They include 75-80 continuous vertical feet yielding an average 30 GPT, or about 100,000 barrels per acre, or 16,000,000 barrels per 160 acre claim, and about 13 continuous vertical feet yielding an average 42 GPT—some 5,200,000 barrels per claim. *E.g.*, App. 137-138.

Petitioner argues that these deposits are not "valuable mineral deposits" for purposes of the public land laws, including in particular the mining laws, Act of May 10, 1872, secs. 1, 6, 17 Stat. 91, 92; 30 U.S.C. 22, 29. By "valuable mineral deposits" it is, of course, true that Congress meant "valuable in an economic sense," that is, value which justifies the expenditure of effort to develop a paying mine with a reasonable prospect of success. That is the classic formulation in *Castle* v. *Womble*, 19 L.D. 455, 457 (1894), subsequently approved by the courts. *Chrisman* v. *Miller*, 197 U.S. 313 (1905); *United States* v. *Coleman*, 390 U.S. 599, 602 (1968). Under the statutory scheme a claim never comes into existence unless in connection with location of the claim there is a "discovery" of a valuable mineral, hence the test must be met at the time of location. It must also be met at the time an application for patent is made, for it must be shown at that time that "the claim is valuable for minerals." *United States* v. *Logomarcini*, 60 I.D.

371, 373 (1949); *The Clipper Mining Co.* v. *The Eli Mining and Land Co.*, 33 L.D. 660, 665 (1905). Thus, worked-out claims which have insufficient mineral value are not entitled to patent. *Best* v. *Humboldt Placer Mining Co.*, 371 U.S. 334, 336 (1963).

Petitioner contends that a mineral must be immediately marketable at a profit to be valuable. In the first place, this contention overlooks the fact that Interior's own evidence showed that oil shale from the Mountain Boy and Shoup claims could have been marketed at a profit at the time of the locations and at the present. See p. 50 n. 36, below. But in the second place, the contention is erroneous; the mining laws require present value, but this can be established by facts that show reasonable prospects of developing a paying mine, *i.e.*, of future marketing at a profit.[35] The weakness of Interior's contention appeared in examination of its own expert economic witnesses in this proceeding. Thus, Dr. William Vogley testified that raw oil shale "had a value as a possible source of future shale oil" and "has" such value now, and in answer to a question by Interior counsel whether "the value you are talking about is or was

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[35] *E.g.*, *Barton* v. *Morton*, 498 F.2d 288, 291-292 (9th Cir.), *cert. denied*, 419 U.S. 1021 (1974) ("Room remains afte discovery of the mineral deposit for application of the principle that the claimant need only show a reasonable prospect that a profitable mine will be developed. The margin between a valuable mineral deposit and a profitable mine may be substantial.").

Congress expressed the same understanding in enacting the Mineral Leasing Act of 1920. During the House debate, Congressman Howard suggested changing "valuable deposit" to "paying". The floor manager, Congressman Sinnott, replied:

> "That language was put in with a great deal of consideration, and we would not like to change from 'valuable' to 'paying.' There is quite a distinction. We are in line with the decisions of the courts as to what is a discovery, and I think it would be a very dangerous matter to experiment with this language at this time." 58 Cong. Rec. 7537 (October 25, 1919).

a present value [or] . . . is or has been a possible future value," Dr. Vogley stated that oil shale "had a present value as a future source of petroleum" and that in his opinion "that answer refers to the entire period of time" from 1917 to the present. App. 140.

This conclusion was buttressed by detailed evidence introduced by Interior showing that commercial-scale operations on the claims at the time of location and at the time of the hearing would have yielded positive returns.[36] Each of these models calculated the expectable return over a postulated "project life." In the case of the 1915-1920 model, the analysis assumed a project life of 17½ years; in other words, in terms of the 1918 date of location of the Mountain Boy claims, it projected the venture forward to 1935-36, a step obviously requiring assumptions as to the course of future costs and receipts and thus as to the future conditions of the petroleum market which shale oil was expected to supplement. Similarly the 1966 model assumed

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[36] *See, e.g.*, Pet. App. 97a-100a. Interior prepared and introduced in evidence at the hearing elaborate cost studies of commercial-scale exploitation of the Mountain Boy and Shoup claims as of the time of location of the claims (1915, 1918, 1919, Exs. G-665 and G-666) and as of the time of the hearings in 1966 (Ex. G-667). The study for the earlier period showed an annual book yield of 7.1 percent, 6.6 percent, and 3.0 percent for 1915, 1918 and 1919, respectively, and a small loss for 1920. The 1966 study showed a return of just under 10 percent. The testimony of the witnesses who participated in preparation of the studies showed that the basis for the studies was (in the words of witness Phillips) "the then current thinking and state of knowledge augmented by whatever assumptions were found to be necessary and reasonable in order to cover all design aspects from the oil shale mine to finished products." App. 132-133.

It is self-evident that these studies were intended to present Interior's no-value theories in the best possible light consistent with the facts. That they fail so signally to confirm that contention is no doubt the reason that the Board of Land Appeals referred to their results principally for the purpose of trying to discredit their significance. Pet. App. 105a.

a project life of 17 years and calculated a "true yield" of 9.84 percent over that period.

This evidence reinforces the logically irrefutable and commonplace observation that present value is a judgment about the future discounted back to the present. It is only when approaching the concept of "value" for the purposes of this case that Interior abandons the real world for a verbal morass in which value at any given time is made to depend on hindsight, and the absence of subsequent commercial-scale development is held to establish the lack of value at a prior time. Interior's other decisions have never required such a showing. For example in *United States* v. *Fairchild,* A-30803 (January 19, 1968), it was stated that:

> "The Department has never said that the rule of *Castle* v. *Womble* requires a demonstration of profits as a 'present certainty' in order to establish the existence of a discovery."

Or as was said in *United States* v. *Smith,* 66 I.D. 169, 172 (1959):

> "The mining laws do not require . . . that the values shown must be such as will demonstrate that a claim can be worked at a profit. . . ."

Or, again, as was said in *United States* v. *Myers,* 74 I.D. 388, 390 (1967):

> "A reasonable prospect of success does not mean a sure thing. The word 'prospect' itself does not connote a certainty."

The Court has been properly concerned that the mining laws not be perverted to serve as a vehicle for acquisition of land for non-mineral purposes on an insubstantial showing of claimed mineral values. This was the setting for *Cameron* v. *United States,* 252 U.S. 450 (1920): the alleged

mining claims in suit lay on the rim of the Grand Canyon immediately adjacent to the railroad terminal at the head of the Bright Angel trail, and the "miner" used the site for a livery stable from which he conducted a profitable tourist trade in mule rides to the floor of the Canyon. Similarly, in *United States* v. *Coleman,* 390 U.S. 599 (1968), the evidence suggested that the supposed mineral value of the land was not the real basis of the claimant's interest: the improvements on the claims "had gone largely into the construction of a residence, domestic water supply and sewage disposal facilities" (Gov't Brief to the Supreme Court, pp. 6-7), and the claims themselves were in a "highly scenic national forest located two hours from Los Angeles" (390 U.S. at 603), which contained areas "set aside as unspoiled wilderness and recreational facilities . . . including camp sites and skiing facilities" (Gov't Brief, pp. 4-5, note 1).

By contrast, the evidence is clear in numerous Government reports and surveys that the non-mineral values of the oil shale lands are nearly non-existent.[37] Indeed, it is manifest that it was widespread public recognition of the mineral value of the oil shale deposits, fanned by Interior's investigations, reports and public statements in the period 1913-1920, which led to the location of the claims in suit and the hundreds of claims heretofore patented. There is no misuse of the mining laws in recognizing their validity.

Even more compelling than the economic analyses prepared by Interior for the hearing below is the massive evidence showing that the Government itself, contemporaneously with the location of the Mountain Boy and Shoup claims, recognized that the Green River Formation oil

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[37] Interior's reports on the Mountain Boy claims, for example, emphasize the arid climate, the fact that the value of the claims for their oil shale was "great" but "only nominal . . . for other uses" and that the timber was "non-commercial." App. 121. The nominal extent of the grazing value is shown by a 1962 grazing lease fixing the rental at one-half the general taxes on the land. Ex. C-759, p. 1.

shales satisfied the value requirements of the mineral land laws, and that the private sector contemporaneously also regarded the oil shales as valuable.

The starting point for this recognition was the continuous investigation of the Green River Formation begun by the United States Geological Survey in 1913, which resulted in a series of classic publications. The first of them appeared in 1915 as U.S.G.S. Bulletin 581-A by E. G. Woodruff and D. T. Day (Ex. G-20). It was followed in 1916 by U.S.G.S. Bulletin 641-F by D. E. Winchester (Ex. G-21), which made the explicit point that "the thickest and richest beds of shale are exposed along the southern margin of the basin," precisely where the claims in suit lie. These and subsequent Government publications, and mass media reports based upon them, resulted in widespread awareness of the existence of the oil shales at issue here.[38]

There was also widespread awareness of economic factors contributing to the value of these oil shales. These factors included the great and recent growth in demand for oil, the failure of any commensurate growth in domestic production, the consequent increase in price (nearly five-fold from 1915 to 1920) and increasing reliance on imported (then mainly Mexican) oil, and a decline both in supply relative to current demand and in known reserves relative to predictable consumption. Department reports and statements by Secretary of Interior Lane emphasized the approaching peak of production and "gave

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[38] The Hearing Examiner noted that "The rich oil shale strata of the Upper Oil Shale Zone can be seen in horizontal beds along the escarpment which extends for many miles through Western Colorado, including the three sides of the peninsula on which the claims are located. Mountain Boy Nos. 6 and 7 and Harold Shoup Nos. 1, 2, 3 and 4 have massive exposures of the oil shale of this zone which can be readily observed at a distance without going on the claims. At the time the claims were located, the geology of the Green River Formation and the location of the oil shale within the formation had been well publicized." Pet. App. 175a.

ominous implications to the decline." App. 134; *see generally* App. 22-24, 26-33, 77, 104-105, 120, 133-135.

In addition, there was the history of successful commercial oil shale industries abroad, particularly in Scotland. Interior's publications contain extensive references to the Scottish industry and note that Green River oil shale compared favorably in yield with the Scottish shale, and that the Colorado beds were much thicker and more regularly bedded and thus more readily mined than the thinner, faulted Scottish shale. *E.g.*, App. 23, 143-144.

The logical conclusion from these facts, that the Green River Formation oil shales were valuable mineral deposits, was explicitly reflected in, and reinforced by, contemporaneous actions by the Government and the private sector. Prominent among these actions was the classification early in 1916 by the United States Geological Survey of much of the Green River Formation as valuable as a source of petroleum and nitrogen. See pp. 27-30, *supra*.

The lands classified in 1916 included the lands located within the next two years as the Mountain Boy and Shoup claims.[39] In classifying lands as mineral, the Survey was thus confirming that there were reasonable prospects for developing a paying mine; the basic purpose of such classification was to separate valuable mineral lands from those that were not such and thus could be obtained under the non-mineral land laws. *E.g., Samuel D. Pulford, et al.*, 45 L.D. 494, 500 (1916), quoted *supra*, pp. 27-28.

A second contemporaneous action that reflected and reinforced the recognition that oil shale was valuable was

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[39] Although there have been subsequent additions to and subtractions from the area classified in 1916, the claims in suit have been unaffected. The standards for classification of oil shale lands were revised by the Survey in 1957, but it was the testimony of Interior's witness Horn that the so-called Mahogany Zone in the area of the claims contains oil shale "many times richer and thicker" than is required by the revised standards. App. 141-142.

the establishment in 1916 of Naval Oil Shale Reserves in Colorado and Utah. See pp. 5-6, *supra.*

Third, Interior recognized the value of oil shale in its administration of the Act of July 17, 1914, which authorized the issuance of homestead patents even though the land in question contained valuable deposits of enumerated minerals, provided that there was a reservation to the United States "of the deposits on account of which the lands were withdrawn or classified or reported as valuable . . ." 38 Stat. 509, 30 U.S.C. 121. One of the enumerated minerals was "oil", which in 1916 the Department construed to include oil shale, and, beginning in that year, patents issued under the 1914 Act for Green River Formation oil shale lands all reserve oil shale to the United States.[40]

Fourth, in the years between 1916 and 1920 spokesmen for Interior expressed in various additional ways the view that oil shale of the Green River Formation was a valuable mineral deposit within the meaning of the mining laws. That was the tenor of the Secretary's response in 1916 to inquiry from Senator Myers on behalf of private locators (App. 13); of Commissioner Tallman's statement in 1917 to a lawyer representing the West Slope Oil Shale Protective Association of Grand Valley, Colorado (App. 33-34);

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[40] *See Brennan* v. *Udall,* 251 F. Supp. 12 (D. Colo. 1966), *aff'd,* 379 F.2d 803 (10th Cir.), *cert. denied,* 389 U.S. 975 (1967). Paradoxically, Interior's present position that Green River Formation oil shale is not "valuable" threatens the interests reserved to the United States in patents on the more than 200,000 acres (*see* Exs. C-308, C-732) patented under the 1914 Act in Colorado and Utah. It is established law that a reservation is ineffective except as authorized by statute and that minerals purportedly but improperly reserved are nonetheless conveyed to the patentee. *E.g., Burke* v. *So. Pac. R.R.,* 234 U.S. 669, 710 (1914); *Davis's Administrator* v. *Weibbold,* 139 U.S. 507, 527-28 (1891); *United States* v. *Iron Silver Mining Co.,* 128 U.S. 673, 680-81 (1888); *Smallhorn Oil Shale Ref. Co.,* 52 L.D. 329, 332 (1928). Inasmuch as the 1914 Act authorized reservations of oil shale only where the oil shale deposits were valuable, Interior's argument points to the conclusion that the reservations were void and ineffective, and that *Brennan* v. *Udall, supra,* was erroneously decided.

of the advice given in 1917 to the State Geologist of Colorado by First Assistant Secretary Vogelsang that "I believe that public lands containing valuable deposits of oil shale are subject to entry and patent under the placer mining laws" (App. 21); of the statement made in September 1917, to Congressman Taylor of western Colorado by the Director of the Geological Survey (App. 19-20); and of the response of Secretary Vogelsang in December, 1917, to Congressman Ayers (App. 25). There are further examples in the Appendix and record.

Fifth, in reflection of these circumstances the decade 1910-1920 saw much private activity focused on the oil shale lands of the Green River Formation. The Hearing Examiner's decision reviews some of the extensive evidence of this activity; as he noted, "the evidence in this respect is massive." Pet. App. 145a. The early efforts concentrated in the area of the Mountain Boy and Shoup claims.[41] These activities and the expenditures they represented, as Interior's witness Netschert testified, reflected the optimism of those engaged in achieving a commercial success and "this optimism was in large part genuine." App. 134-135. One element in that optimism was no doubt the fact, as Interior's witnesses testified, that as a technological matter various petroleum products of marketable quality could then be made from Green River Formation oil shale.[42]

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[41] As the district court found, the fact that the early investors included persons of prudence and mining expertise such as Karl C. Schuyler, Sr., "who reasonably believed that a valuable mine could be developed is persuasive authority to satisfy the 'valuable mineral' test, even under *Castle* v. *Womble* . . . and *Coleman* . . ." Pet. App. 47a.

[42] One of these witnesses, Harold M. Thorne, had joined the Bureau of Mines in 1924 and begun work on oil shale in 1926; in 1928 he was appointed to take charge of shale oil refining studies at the Bureau of Mines laboratory in Boulder, Colorado; in 1944 he became chief of the Oil Research Branch of the Bureau's Petroleum Experiment Station in Laramie, Wyoming. It was his testimony that around 1920 the major products derived from petroleum could have been made from oil shale. App. 131-132. *See also* App. 122-131 (testimony of witness J. Blount Mull, also retired from the Bureau of Mines).

As to present value, Interior's own studies, prepared for this case, show that a positive annual return of approximately 10 percent could be realized from commercial operations around 1966 in the area of the Mountain Boy and Shoup claims. *See, e.g.*, Pet. App. 160a-165a. These studies are nothing less than admissions and thus should be given substantial weight. There is no contrary evidence, and the record contains several other current cost studies—uncontradicted—by Government and private persons alike, that also show positive returns from oil shale production. Pet. App. 161a-165a. Oil shale clearly satisfies the test of value. In fact, the Board conceded that if commercial operations had been currently established, it would have been "loathe to declare the claims invalid." Pet. App. 106a-107a, n. 55. Thus, if one accepts Interior's expert testimony—and the claim owners are entitled to do so—the present value of oil shale is undeniable.[43]

III. DURING THE YEARS 1916-1920 INTERIOR FORMULATED, IN 1920 INTERIOR PROMULGATED, AND FROM 1920 TO 1960 INTERIOR CONSISTENTLY MAINTAINED, AN ENTIRELY PROPER AND SOUND RULE RECOGNIZING THE VALUE OF GREEN RIVER FORMATION OIL SHALE, AND INTERIOR MAY NOT APPLY A CONTRARY RULE TO THE MOUNTAIN BOY AND SHOUP CLAIMS.

This issue presents a broad question of important legal principle: the power of a government agency to repudiate a long established, consistently applied, and reasonable rule which has constituted the law for decades. It is difficult to conceive of an agency rule of more considered formulation, longer standing, or more consistent application than the rule that oil shale deposits of the Green River Formation constituted valuable mineral deposits. If that rule can be

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[43] This has not prevented efforts to deny the undeniable. The Board of Land Appeals, for example, even implied that the oil shale deposits for which a federal lease bonus of 210 million dollars was bid in 1974 were not valuable. Pet. App. 107a-108a, n. 54.

overthrown by an agency *ipse dixit,* retroactive rule-making would appear to be beyond the reach of judicial review.

As Point II above demonstrates, the rule recognizing the value of oil shale was, at the very least, a reasonable application of the mining laws to the particular circumstances of the Green River Formation around 1916-1920. As the facts show, the rule was very thoroughly considered, was prominently published, was adopted contemporaneously with the enactment of the savings clause of the Mineral Leasing Act of 1920, was ratified by the Congress, and was consistently applied to thousands of oil shale claims for more than forty years.

It is well established that attempts at retroactive treatment such as that presently urged by Interior must undergo the most stringent scrutiny, whether the rule sought to be imposed is characterized as legislative or interpretive.[44] The standard for assessing the propriety of an agency's attempt to apply a new rule retroactively is a balancing of the necessity for an immediate implementation of a new policy against the impact on those affected by the application of the new policy to past conduct conforming to the prior standard. The ends to be served by the retroactive change must be truly imperative to justify the resulting inequities. "The power to require readjustments for the past is drastic . . . it ought not to be extended so as to permit unreasonably harsh action without very plain words." *Brimstone Railroad and Canal Co.* v. *United States,* 276 U.S. 104, 122 (1928). In condemning an attempt by the Interstate Commerce Commission to order a retroactive adjustment of a division of rates set by the parties, *Brim-*

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[44] *See, e.g., Oil Shale Corp.* v. *Morton,* 370 F. Supp. 108, 123-124 (D. Colo. 1973); Davis, *Administrative Law Treatise* § 7.23 (2d ed. 1979); Baird, *Prospective Interpretative Rulemaking,* 25 Business Lawyer 1581 (1970); Shapiro, *The Choice of Rulemaking or Adjudication in the Development of Administrative Policy,* 78 Harv. L. Rev. 921, 933 (1965); Griswold, *A Summary of the Regulations Problem,* 54 Harv. L. Rev. 398 (1941).

stone echoes the decision in *United States* v. *Alabama R.R.*, 142 U.S. 615, 621 (1892), in which the Court said:

> "[T]he judicial department will lean in favor of a construction given to a statute by the department charged with the execution of such statute, and, if such construction be acted upon for a number of years, will look with disfavor upon any sudden change, whereby parties who have contracted with the government upon the faith of such construction may be prejudiced."[45]

The Court applied the same doctrine in *Logan* v. *Davis*, 233 U.S. 613, 626-27 (1914), holding that Interior was not free to alter its established construction and application of the Land Grant Adjustment Act of 1887:

> "[T]he question is not altogether new. It has often arisen in the administration of the act, and successive Secretaries of the Interior uniformly have held that the remedial sections embraced purchases after the date of the act, no less than prior purchases, if made in good faith. Many thousands of acres have been patented to individuals under that interpretation, and to disturb it now would be productive of serious and harmful results." (Citations omitted.)

The same principle was applied in *Lane* v. *Hoglund*, 244 U.S. 174 (1917). The Court again held that Interior was not free to depart from an established construction so as to deny patent on a homestead entry which under prior practice would not have been the subject of objection.

The lower courts have often applied the same doctrine. In *NLRB* v. *Guy F. Atkinson Co.*, 195 F.2d 141 (9th Cir. 1952), the Ninth Circuit observed:

> "We think it apparent that the practical operation of the Board's change of policy, when incorporated in the

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[45] *Accord*, *Edward's Lessee* v. *Darby*, 25 U.S. (12 Wheat.) 206 (1827); *United States* v. *State Bank of North Carolina*, 31 U.S. (6 Pet.) 29, 39 (1832).

> order now before us, is to work hardship upon respondent altogether out of proportion to the public ends to be accomplished. The inequity of such an impact of retroactive policy making upon a respondent innocent of any conscious violation of the act, and who was unable to know, when it acted, that it was guilty of any conduct of which the Board would take cognizance, is manifest. It is the sort of thing our system of law abhors." 195 F.2d at 149.

Accord, Retail, Wholesale and Department Store Union v. *NLRB,* 466 F.2d 380, 391-392 (D.C. Cir. 1972); *Vassilious* v. *District Director of Immigration & Nat. Serv.,* 461 F.2d 1193, 1195 (10th Cir. 1972).

Interior's attempted repudiation of its long-standing discovery rule is not only a gross departure from these principles long enunciated by the courts, but a betrayal of its own well-established policy to confine a changed construction of a statute to prospective application. *See, e.g., Rough Rider and Other Lode Claims,* 42 L.D. 584 (1913), 41 L.D. 242 (1911) (refusing to give retroactive application to a new and more stringent rule of discovery in the porphyry copper district of Arizona); *Hidden Treasure Consolidated Quartz Mine,* 35 L.D. 485 (1907); *Birch Pomeroy Mill Site,* 34 L.D. 320 (1905); *Gowdy* v. *Kismet Gold Mining Co.,* 24 L.D. 191 (1897) (new rule that notice of publication must name adjoining claim not to be applied to prior notices); *French Lode,* 28 L.D. 675 (1896); *Mary R. Leonard,* 9 L.D. 189, 190-191 (1889) (*held,* that a new and more stringent requirement as to satisfaction of the statutory requirement for cultivation of a timber claim as a prerequisite to patent would be given only prospective operation).

Because they involved a question whether to change a discovery rule, as does in this case, and because the geographical area to which the question referred possessed special characteristics, as does the Green River Formation,

the *Rough Rider* decisions, *supra,* deserve fuller consideration. In the 1911 decision Interior had rejected patent applications for claims in the Arizona porphyry copper district where surface mineralization was slight and the underlying valuable mineral deposits were irregular in shape, small in size and often isolated. 41 L.D. at 253. On rehearing in 1913, Interior reversed that decision, holding that, inasmuch as the geologic conditions were the same as those on claims previously passed to patent, the prior rule should continue to apply.[46] Interior's rationale for declining to apply the new rule retroactively in that case should be equally applicable here:

> "It was upon showings such as this that entries and patents were allowed for mining claims in this region at the dates of the locations and entries of the claims here involved. There can be no question therefore that at those times a more liberal rule with reference to mining locations situated in this region prevailed in the land department than that applied by the Department with respect to the claims here in question in its decision of January 31, 1911, and that had said earlier rule been followed with regard to these locations they would in the absence of other objections have been passed to patent. This being true, and it appearing that these locations and others in that vicinity, based on the same character of discovery, had been, in reliance on such rule, purchased and dealt with as property, the Department is now of opinion that the rule under which the entries were canceled should not have been given retroactive application to the prejudice

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[46] Another parallel between *Rough Rider* and this case is that the discovery rule there in question was explicitly reviewed and approved by the Justice Department as was done with the oil shale discovery rule involved here. *See* 42 L.D. at 586-87 and the report of the Justice Department in 1930 to Secretary Wilbur on the oil shale discovery rule. Exs. C-321; C-409. Here, of course, there is, in addition, congressional ratification of the oil shale discovery rule.

> of the owners of the claims, but, on the other hand, that the said previous and long-continued practice of the land department established a rule of property with respect to such claims which should have been adhered to and followed in the determination of this case." 42 L.D. at 587-588.

Interior's oil shale decisions have themselves recognized the vice of retroactivity. *James W. Bell,* 52 L.D. 197, 198-99 (1927), characterized a line of consistent decisions concerning one aspect of the validity and patentability of oil shale claims, as "constitut[ing] a rule of property, and, though the facts vary, [they] are decisive of the principle that a location, otherwise lawful, of mineral land embraced in a subsisting but uncompleted [homestead] entry, constitutes a property right in the highest sense of that term. . . ." In a decision a quarter century ago Interior reaffirmed the rule in *Bell* and refused to depart from it, in further language as apt in this case as that one:

> "The *Bell* decision has been accepted as defining the rights of mineral locators in similar circumstances. The Bureau of Land Management has issued in recent years several mineral patents for oil-shale-placer claims covering lands in this area to mineral locators who reconveyed the surface and unreserved minerals to the United States.
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> "The rule established in the *Bell* case has been consistently followed for some 30 years. Therefore, it should not be changed in the course of adjudication except for compelling reasons. . . . There appear to be no such compelling reasons in this case. If the rule is to be changed, it should be done by regulation so as to provide for prospective application only." *Union Oil Company of California*, 61 I.D. 106, 108-109 (1953) (citations and footnotes omitted).

In light of these authorities, it will be illuminating to review the administrative practice and rule that Interior

has sought to discard, arguing below only the factitious proposition that the rule was "error."

Formulation and Promulgation of the Rule, 1916-1920

The background of the rule has been sketched above, see pp. 3-10. It is enough here to note that while the rule that Green River Formation oil shale was valuable was first definitively applied in the *Instructions* of 1920, its antecedents dated from 1916, when Interior classified much of the land within the Green River Formation as valuable mineral lands, began to reserve oil shale in homestead patents issued pursuant to the Act of July 17, 1914, selected more than sufficient lands for the new Naval Oil Shale Reserves to allow for previously located claims within the area reserved, and recommended the inclusion of oil shale in mineral leasing legislation precisely because of its value. The formal rule was also anticipated in the numerous Department statements to members of Congress and others favorable to the validity and patentability of claims located for oil shale under the mining laws. The 1920 *Instructions* thus represented the logical and formal enunciation of a position more or less explicitly foreshadowed in Department action and utterance in the four prior years. That prior history afforded ample support for the conclusion expressed in the *Instructions* that "lands valuable on account" of their oil shale deposits "must be held to have been subject to valid location and appropriation under the placer mining laws."[47]

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[47] App. 49-54. The General Land Office was instructed to complete processing of the patent application for the La Paz claims, which had occasioned the full-scale review resulting in issuance of the *Instructions,* in accordance with the procedures of the Petroleum Placer Act and five days later Commissioner Tallman, noting that "the reports of the field men [show] discoveries and expenditures as required by the statutes," clear-listed the application and returned it to the Minerals Division for preparation of patent, which issued on August 9, 1920. App. 55-56.

The Consistent Application of the Rule, 1920-1960

The *Instructions* did not dispense with the need to show that a claim contained substantial deposits of oil shale, but in formally resolving the issue whether such oil shale deposits were "valuable mineral deposits" under the mining laws, they laid the basis for 40 years of consistent administration of the law. Recognition of the value of oil shale of the Green River Formation within the meaning of the mining law is reflected over that period in many ways, amply documented in the record. We can only summarize here the vast body of evidence showing adherence to and reaffirmation of the rule in (i) the patenting of more than 2,000 claims, (ii) Government contest decisions, (iii) private contest decisions, (iv) continued classification of the oil shale lands by the Geological Survey, (v) continued reservation of oil shale in 1914 Act patents, and (vi) the continued and consistent exercise of its rule-making power by the Department in applying and reinforcing the basic rule.

(i) *Patenting.* Interior issued patents on oil shale claims in the Green River Formation in nearly every year from 1920 to and including 1960 (Exs. G-104, C-190), since which latter date patenting has been precluded by Interior's repudiation of the rule. The number of claims patented is 2,326 and the acreage embraced within them is more than 340,000.

Every patent application, as Interior's regulations throughout have required, must show a sufficient original discovery on each claim.[48] Hence, every application necessarily provided the occasion for the reaffirmation of the rule. In examining the application and investigating the claims, General Land Office officials both in the local offices and in Washington were involved, with the latter carefully

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[48] *See* 31 L.D. 453, 477, 484, Regulations, Placer Claims (1901); 35 L.D. 664 (1907); 49 L.D. 15, 58, 61, 73, Regulations, Nature and Extent of Mining Claims (1922); 43 C.F.R. § 3863.1-3(a) (1978).

reviewing the completed application file and preparing and issuing the patent. Substantive defects in an application, such as an issue as to the applicant's showing of a sufficient "discovery of a valuable mineral," would be referred for resolution to a fact hearing, called a contest, initiated by the local land office. This usually arose as a consequence of an adverse report from the field examination, which was a characteristic feature of Interior's careful processing of oil shale applications.[49]

On a number of occasions the Secretary himself personally participated in approving the issuance of oil shale patents. *E.g.*, App. 56, 98, 102-103.

(ii) *Government Contests.* As the sufficiency of discovery was an explicit element of the processing of a patent application, where doubt existed as to that factual issue it was referred for decision to a contest. The record contains numerous examples of contest decisions involving the contention that claims were invalid for lack of discovery, where the facts did not show a physical discovery of oil shale of the richer zones.[50] For example: The first patent application for the Mountain Boy claims resulted in administrative determinations that discoveries had not been made on claims 2-5 and 8 not here in issue; in 1930 the

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[49] The reports of the field examiners in the 1920's show a sophisticated appreciation of the contemporaneous state of efforts to establish an oil shale industry, the belief of locators and applicants in the eventual success of that industry but, equally clearly, uncertainty that the efforts then being made would succeed. Thus Examiner Deitz in a 1921 report stated that while "the future of the oil shale industry is assured" in view of the likely exhaustion of petroleum, "the extraction of oil from shales has not proved to be commercially profitable in this country." Ex. C-107.

[50] First Assistant Secretary Vogelsang reiterated the prudent man rule in 1921: "a discovery would mean the uncovering or exposure of a deposit of oil shale in sufficient quantity and of sufficient value to warrant a person of ordinary prudence in the development and exploitation of the property for the purpose of producing oil and other by-products from the shales. . . ." App. 56.

Secretary ruled that no discovery had been made on the Hope No. 10 claim (Ex. G-538); in 1931 Assistant Secretary Edwards held no discovery had been made on the Annex No. 6 (App. 102).

In addition, thousands of oil shale claims for which no patent applications had been filed, including the Shoup claims, were the subject of recurrent Department investigations in the 1920's and 1930's, and, where applicable, the charge of lack of discovery was made.[51] It is thus clear that Interior applied the 1920 rule in many situations in addition to the claims that went to patent.

(iii) *Private Contests.* Another context in which the issue of discovery could and did arise was a private contest between two rival claimants or applicants to the same land. For example, in *Dennis* v. *Utah,* 51 L.D. 229 (1925), Interior affirmed the validity of an oil shale claim containing significant amounts of oil shale which had been found when the land had been open to location. In *Smallhorn Oil Shale Refining Co.,* 52 L.D. 329 (1928), a contest between an oil shale lease applicant and a homesteader holding a 1914 Act patent and claiming preferential leasing rights, Interior reaffirmed that oil shale lands classified as valuable for oil shale were subject to appropriation under the mining laws. The decision expressly relied on the 1920 *Instructions.*

The most famous private contest was undoubtedly *Freeman* v. *Summers,* 52 L.D. 201 (1927), a dispute between a homesteader (Summers) and the owner of oil shale claims (Freeman) that conflicted with the homestead entry. The controversy, which began in 1923, ended in 1927 with a decision sustaining the validity of the oil shale claims. The final decision has been given importance in the prior decisions in this case because it became a principal focus of the extensive congressional and executive review and hear-

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[51] *See, e.g.,* App. 48, 57-59, 68-69, 101-104.

ings into Interior's administration of oil shale claims in 1930-1931, discussed above. Because that review resulted in vindication of Interior's rules and practices in administering oil shale lands prior to 1930 (pp. 13-15, 39-44, *supra*), the decision of *Freeman* v. *Summers* has subsequently been regarded as significant precedent. In fact, however, it is only the most celebrated and extensively considered case in a consistent series of hundreds of rulings to the same effect from 1916 to 1960. On the point here at issue, *Freeman* v. *Summers* held that oil shale deposits have been "well known for a number of years, and have been the subject of much exploration, study and investigation. They have been recognized by the department and by Congress as a very valuable natural mineral resource. They have been the subject of treatment in a large number of experimental reduction plants, one of which was provided for by Congress and is now in operation [a reference to the Bureau of Mines, oil shale plant at Rulison, Colorado]", that "there has been no considerable production of oil from shales" because of abundant petroleum more cheaply produced from wells, but "there is no possible doubt of its value" and there is no requirement "that the mineral in its present situation can be immediately disposed of at a profit." App. 59-67.

Freeman is significant here because the extensive proceedings included a rulemaking hearing conducted by Secretary Work in 1926 on what should be regarded as a discovery of oil shale, the case resulted in reiteration of the 1920 rule, and the result was widely publicized in Interior's Annual Report for 1927 and otherwise. *See* App. 67-69, 90-96, 98.

(iv) *Continued Classification.* The 1916 classification of oil shale lands was followed in 1919 by both additions and reductions of the area thus classified, as additional land was shown to be valuable mineral land and as some lands originally classified "were found to have insufficient mineral

value to warrant this classification." App. 43. When the petroleum industry became severely depressed by overproduction, the Secretary, by order dated April 15, 1930, withdrew public domain oil shale from leasing. Ex. G-32. To give effect to the order, Interior published *Instructions, Withdrawal of Oil Shale Lands,* 53 I.D. 127 (June 9, 1930), including maps of the areas affected by the withdrawal, which were specified as land containing "oil shale of recognized commercial importance."[52]

In 1957, as noted above, the Geological Survey, taking account among other things of "the grade of shale that was being mined commercially in various parts of the world" (App. 141-142), formulated modified standards for classification of oil shale land. Throughout, the lands within the Mountain Boy and Shoup claims have been classified as valuable oil shale lands. See page 35 n. 22, *supra.*

(v) *Reservation of Oil Shale in 1914 Act Patents.* After the 1916 classification, Interior recognized that land containing oil shale of the Green River Formation was "valuable" mineral land within the meaning of the public land laws by requiring reservations of oil shale in patents issued under the Act of July 17, 1914. *See Brennan* v. *Udall,* 251 F. Supp. 12 (D. Colo. 1966), *aff'd,* 379 F.2d 803 (10th Cir.), *cert. denied,* 387 U.S. 975 (1967). This practice continued consistently thereafter. The record shows that in Colorado alone 196 patents issued under the 1914 Act between 1916 and 1955, covering 41,973 acres, contain reservations of oil shale to the United States. Ex. C-308. The record as to Utah is equally impressive. According to a 1965 memorandum by the State Director for Utah of the Bureau of Land Management, such reservations appeared in patents for 167,731 acres of "lands known to be valuable for oil shale." Ex. C-732.

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[52] Assistant Attorney Richardson observed at the time that the temporary glut of oil "should not serve to diminish or negative the ultimate great economic importance of oil shales. . . ." Ex. C-321, p. 12.

(vi) *Continued Rulemaking.* The 1920 *Instructions,* which formally laid down the rule that oil shale was a valuable mineral within the meaning of the mining laws, were confirmed by subsequent rulemaking actions.

One such occasion occurred in the course of the proceedings in *Freeman* v. *Summers, supra,* at a well-attended public hearing in December, 1926, the significance of which is shown by the fact that Secretary Work himself presided. At that time an intermediate decision in the case had been construed and was being applied by the Field Division as obliging oil shale claimants to satisfy, for purposes of the discovery requirement, the Geological Survey classification standard, that is, that there had been actually exposed on the claim (as distinct from contained within it) a bed of shale meeting the classification standards of richness and thickness. The principal purpose of the hearing was to consider whether the proposed new standard, which departed from a number of previous rulings (see note 11, page 13, *supra*), was appropriate. The rulemaking character of the hearing was expressly confirmed by the Secretary, who stated that "this hearing . . . has definite and exclusive reference to oil shale—particularly to the laws and the regulations. . . . We have to make the regulations under the laws. . . ." App. 93.

The participants at the hearing included a number of oil shale claim owners, attorneys representing claimants, members of Congress, and Interior officials knowledgeable about oil shale. In the course of the hearing it was explained by Interior that the supposed new rule as to physical finding was merely under consideration. A number of arguments against the new rule were advanced, and it was urged that Interior should continue to apply the rule which it had been applying, that what was required to establish a discovery of oil shale in the Green River Formation was a finding of shale in a totality of circumstances such that a prudent man would be justified in further efforts to develop a paying mine at depth. The Secretary indicated that the alternative had much to recommend it (*see* App. 96) and

the question was taken under advisement. Interior's final decision on discovery in *Freeman* v. *Summers,* announced the following year, reaffirmed Interior's prior discovery rule.

In 1927 there was, of course, no *Federal Register,* and Interior had to resort to other means to give wide publicity to the final decision in *Freeman* v. *Summers.* It was published in the official Department reports. It was also referred to at length in Interior's annual report for 1927, which noted with reference to the oil shale deposits of Colorado, Utah and Wyoming that in prior years "these deposits were held to be subject to location and entry under the placer mining laws" and that the subject of oil shale had been one of the "important subjects" before Interior in 1927. The report then stated:

> "Immediately prior to the enactment of the leasing act, numerous locations were made upon the shale areas under the placer mining laws, and many of these locations have been followed by applications for patent. It became the duty of the department to consider these claims and to determine whether the locators had complied with the requirements of the general mining laws. A public hearing, attended by many people interested, was held in the department on December 1, 1926, and the subject was thoroughly discussed. Following this hearing, after extended consideration by the department, decision was rendered in the case of Freeman et al. v. Summers, involving primarily, the question of what constitutes sufficiency of discovery upon certain shale placer mining claims. The department applied the long-established rule that when the locator had discovered mineral within the limits of his claim in a situation and formation that the vein or deposit could be followed to depth, with reasonable assurance that paying minerals will be found, such discovery may form the basis of a patent, where compliance with the law has been had in other respects." App. 68.

Subsequent to *Freeman* v. *Summers,* Interior issued *Instructions* on November 12, 1927, 52 L.D. 333, which among other things reiterated the prevailing rule as to discovery. These instructions showed the continuing effect of the 1920 *Instructions,* for on a minor point (the applicability to oil shale claims of the so-called five claims act) the 1920 *Instructions* were "overruled." 52 L.D. at 334. In 1931 Secretary Wilbur issued directions to the Field Division chiefs in reference to *Freeman* v. *Summers* that any oil shale case "coming within the broad principles laid down in that decision . . . should be adjudicated in accordance with those principles." App. 98. In a 1954 Monograph of the Bureau of Land Management, *Freeman* v. *Summers* was cited as illustrative of Interior's practice of adopting specific rules for the adequacy of discovery in particular districts. App. 113-114. In a memorandum of September 9, 1957, entitled "Sufficiency of Discovery for Oil Shale Placer Claims," the Director of the Bureau of Land Management reiterated the continuing applicability of the rule expressed in the 1920 *Instructions* and in *Freeman* v. *Summers.* App. 120.

Interior's Attempted Repudiation of the Rule, 1961 to Date

In 1961 Interior privately adopted, and in 1964 announced, a new rule on discovery, namely that no oil shale claim was ever "valuable". This reversal was as complete as it was abrupt. From 1961 on, mineral examiners reported as required by the new rule that every pending oil shale claim lacked the requisite "value" in stark contrast to a number of favorable reports a year or two earlier by the same examiners on the same claims.[53] This led, among

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[53] For example, *compare* Ex. C-883 *with* Exs. C-881 and C-885 (on the Mountain Boy claims); *compare* Ex. C-306 *with* Ex. C-305 (on the Sunset claims); *compare* Ex. C-360 *with* Exs. C-307 and C-879 (on the Oyler claims); *compare* Ex. C-294 *with* Ex. 293 (on the Brush Creek claims).

other things, to the return of the Mountain Boy application from Washington, where it had been sent early in 1961 for issuance of patent, and to the institution in 1964 of the current litigation.

The only justification for this reversal (other than to preserve oil shale for leasing because of its great value), has been the bold assertion below that the prior rule was "error". The prior rule had a sound factual basis and was surely within the authority of Interior to adopt as an original matter.[54] The rule was known and ratified by the Congress and was consistently applied for 40 years in thousands of decisions administering the public land laws. Under the authority cited at pp. 58 ff., *supra,* such a rule may not be altered with retroactive effect absent the most compelling circumstances. Interior's 1961 *ipse dixit* that no more oil shale claims should go to patent falls far short of meeting that requirement.

IV. UNDER THE PRINCIPLES OF EQUITABLE ESTOPPEL, THE DEPARTMENT OF THE INTERIOR IS PRECLUDED FROM ASSERTING THAT OIL SHALE OF THE GREEN RIVER FORMATION HAS NEVER BEEN VALUABLE.

As the record demonstrates and as the district court found (Pet. App. 39a ff.), from 1916 through 1960 the Department consistently stated and acted upon the proposition that Green River Formation oil shale deposits were valuable and that pre-Leasing Act claims were eligible for patent. This proposition was expressed for various purposes, including encouragement around 1916-1918 of the location of oil shale claims and private sector efforts to develop a commercial industry. Another purpose was to win the acceptance of the oil shale claimants and their congressional representatives for the inclusion of oil shale in the Mineral Leasing Act of 1920.

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[54] *See, e.g., Udall* v. *Tallman,* 380 U.S. 1, 16-18 (1965).

Indeed, during these years the Bureau of Mines actively assisted private parties, and Interior issued a stream of statements intended to encourage private investment.[55] Thus, in the 1917 Report of Secretary Lane it was stated that:

> "As a result of the investigations of the western oil shales, it is believed that it is now commercially feasible to work selected deposits in competition with oil from wells." A. 18.

A number of Interior witnesses testified at the hearing to the existence of this body of Government utterances encouraging an interest in oil shale and containing statements which if believed could have been expected to induce that interest.[56] The decision of the District Court contains a number of examples. Pet. App. 42a-45a.

In consequence of such statements and actions, many claims were located, many development efforts proceeded, agreement was reached on including oil shale in the Mineral Leasing Act,[57] and over the years since 1920 a great many

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[55] See, *e.g.*, A. 19, 30-31, 36, 125, 127.

[56] Testimony of Messrs. Campbell (A. 138-140), McIntosh (A. 147-148), Schramm (A. 142-143), Phillips (A. 144), and Russell (A. 146-147).

[57] The Department clearly understood the interrelationships among inclusion of oil shale within the Leasing Act, the patentability of prior claims, and private efforts to develop an industry. In 1918 Dr. David Day, one of the Department employees most active in promoting oil shale development, wrote to the Director of the Bureau of Mines:

> "The inclusion of a clause leasing the oil-shale lands . . . in the proposed leasing bill has apparently resulted in an entire suspension of activities toward the development of oil-shale lands in western Colorado. . . . At present it is reported by State Geologist George that all of these efforts toward the erection of plants have shut down until the fate of the leasing bill has been established. Dr. George is of the opinion that the interest in the development of oil-shale lands in western Colorado will cease if the lands cannot be patented." Ex. C-567, pp. 2-3.

persons have expended money and effort in purchasing unpatented oil shale claims, doing work on them, preparing and prosecuting applications for patent, and continuing work on commercial technology.

As the district court found below:

> "Prudent investors [in oil shale] detrimentally relied upon the deliberate actions and statements of high government authorities. Such government encouragement was clearly undertaken in an official capacity, and comports with the subsequent treatment of oil shale both by the Department of the Interior in its *Instructions* of 1920 and by Congress. This is a clear case for the application of equitable estoppel against the government." Pet. App. 40a.

The district court opinion sets forth at length some of the voluminous evidence which can be found in the record and in the contemporary press of Interior's utterances and other Government statements intended to induce private investment in the development of the means by which the oil potential of the Green River Formation might be realized. The result was that "Interest in oil shale revived in the 1910 to 1920 period and has continued to the present time," as both the Examiner and the Board found. Pet. App. 80a, 145a.

The resulting activity was both specific as to the claims in suit and general as to the oil shale region as a whole. Shortly after the 1920 *Instructions,* Carl Schuyler, the grandfather of the family which owns the four Harold Shoup claims in this case, purchased those claims. He spent more than $100,000 in the construction of a commercial plant and another $100,000 in the purchase of claims and the performance of work on them. He and his family also devoted time and funds to defending the claims during Interior's investigation of them in the years 1928-34 and

in preparing and prosecuting the patent application that was filed in 1960.

The Mountain Boy claims Nos. 6 and 7 were purchased in 1920 from the original locators on behalf of a business trust, the beneficiaries of which invested $25,000 and subsequent sums in later years for the purchase price and subsequent assessment and patent work on the claims. Efforts to obtain patent, for which an application was filed in 1924, continued until 1945, when the application was dismissed without prejudice.

In 1956 Shell Oil Company contracted to buy the claims when patented and undertook to advance $12,800 for expenses in perfecting title and obtaining patent. In doing so, Shell understood that Interior had previously ruled favorably (in processing the first application) on the question of discovery on the Mountain Boy claims in suit. By 1964 Shell had spent at least $18,780 in perfecting title to and seeking patent for the claims, as the Board agreed. Pet. App. 117a.

More generally, the efforts and investment induced by the Government's encouragment and Interior's policies were reflected in hundreds of ventures. The decision of the hearing examiner reviews a number of them, confessedly only a sample. Pet. App. 145a-156a. More recently, substantial sums have been expended by companies and individuals in acquisition of land and in the development and improvement of the various steps in the process of mining, crushing, retorting and refining by which the oil shale deposits can be exploited to provide petroleum products and by-products for our increasingly energy-deficient nation. *E.g.*, Pet. App. 156a-157a.

Against this factual background of government-induced private investment and reliance, the district court held the Department estopped from challenging the claims in suit on the discovery grounds advanced, observing that "For

years, top administrators in the Interior Department have recognized the energy potential of oil shale. They themselves generated financial and other interest in its mining." Pet. App. 39a-40a.

The petitioner argues (Brief, p. 44) that "the government cannot be estopped" and that there is not "a single case in which this Court has held that the government was, or could be, estopped" (*id.* at 45). The vigor of that contention is more than somewhat undercut, however, by the petitioner's simultaneous request that the Court reach out to review the estoppel issue, although it was not passed on by the court of appeals and was not a subject of the petition for certiorari, on the ground that "it is important and recurring" and that, moreover, there is a conflict among the circuits as to whether the government can be estopped (*id.* at 43). This seemingly schizophrenic approach reflects the circumstance that, while in the most technical of senses the Court has not "held" the government estopped, its few decisions in the last quarter century that might be thought relevant to the subject are carefully limited statements that by no means preclude estoppel of the government or disavow the increasingly candid doctrinal development that has occurred in recent years among the circuits.

There is, therefore, no point in a review of the early authorities. The most recent decision of this Court to which the petitioner refers is the *per curiam* decision in *Immigration & Nat. Serv.* v. *Hibi,* 414 U.S. 5 (1973), in which the Court continued to leave open, as it had in *Montana* v. *Kennedy,* 366 U.S. 308, 314-15 (1961), the question whether "affirmative misconduct," as distinct from mere inaction, might give rise to an estoppel. *Moser* v. *United States,* 341 U.S. 41 (1951), although redolent of estoppel, does not, at least technically, constitute a decision on that question. In that case the petitioner for citizenship, a Swiss national resident in the United States, had sought exemption from military service in World War II under a Swiss-American

Treaty of 1850, unaware of a subsequent statute that allowed a neutral to claim such exemption only on pain of waiver of any subsequent right to obtain citizenship and "[i]n justifiable reliance" (341 U.S. at 46) on advice from the Swiss Legation (evidently based, in turn, on somewhat ambiguous statements by the State Department) that his exemption application would not cause him to lose his rights to citizenship. The Court, eschewing a conclusion cast in terms of estoppel, stated that "elementary fairness" required nothing less than a knowing waiver of citizenship rights and reversed the denial of his petition. 310 U.S. at 47.

Even cases cited by the petitioner that do talk in terms of estoppel rest on facts obviously distinguishable from the circumstances in this case. One example is *United States* v. *San Francisco,* 310 U.S. 16 (1940), discussed by the petitioner at page 49 of his brief. That case involved an injunction suit to restrain San Francisco from selling electric power derived from the Hetch-Hetchy project in Yosemite Valley to Pacific Gas & Electric Co. in violation of an express condition of the legislation which had made federal lands available to San Francisco for purposes of power generation. Not only was such a sale prohibited, but the statute also imposed a condition subsequent on San Francisco's continued right to use the land if the statutory restriction was not complied with. The city argued, as the last of several points, that the United States was estopped by conduct of its agents from requiring compliance. The Court, in rejecting the argument, responded that, as a factual matter, it was "doubtful" that the Interior Department "at any time ever did more than merely to tolerate" sale and distribution by the utility "as a temporary expedient." 310 U.S. at 31. The distinctions from the present case are obvious: there an explicit statutory prohibition against the conduct taken, here the general terms of the mining laws and the savings clause of the 1920 legislation

which both Congress and the Department thought consistent with recognition of the value of oil shale; there "mere toleration" of certain conduct "as a temporary expedient," here a purposeful affirmative course of conduct implemented at the highest levels of the Department by successive Secretaries over nearly 50 years and repeatedly made known to Congress.[58]

Utah Power & Light Co. v. *United States,* 243 U.S. 402 (1917), another decision cited by the petitioner (Brief, p. 45), likewise rested a rejection of an estoppel argument on mere inaction by federal officials. At issue in that case was the legality of the use by a power company of public domain land largely within forest reservations for a complex of dams, reservoirs, power plants and transmission lines, as to which no federal permit or license had been sought or given. The utility principally relied upon a contention, which the Court summarily rejected, that the State of Utah had the right to dispose of public domain within its border and upon a succession of federal statutes granting limited rights of way for waterways on the public domain, which the Court held had been superseded, so far as relevant to the generation of power, by later statutes requiring a federal permit for which no application had been made. The Court declined to recognize an estoppel based on a few years of Interior Department inactivity in enforcing the federal statutes, on the principal that "laches or neglect of duty on the part of officers of the Government is no defense to a suit by it to enforce a public right or protect

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[58] In light of the political transaction by which, quite clearly, Western support for the inclusion of oil shale in the leasing bill was obtained in exchange for the savings clause (see pp. 7-8, 32-34, *supra*), one further point in the *San Francisco* decision is pertinent. The city's position included the argument that the statutory restriction on the use of Hetch-Hetchy power was unconstitutional, and the Court's opinion notes with some asperity that "[n]ow, the City seeks to retain the benefits of the Act while attacking the constitutionality of one of its important conditions." 310 U.S. at 29.

a public interest." 243 U.S. at 409. Again there is no parallel to the present case. Here there is no mere "laches or neglect of duty" to enforce a statute not complied with. On the contrary, the respondents and their predecessors in interest have scrupulously complied with all of the requirements imposed by the Department in administering the mining laws as applied to oil shale for 40 years. Nor is there in the *Utah Power* case or the *San Francisco* case, or in any other authority on the issue of estoppel of which we are aware, anything comparable to the circumstance, for which the district court opinion cites such a wealth of evidence (Pet. App. 41a-47a), that the activity resulting in the location of the mining claims now challenged by the Interior Department as always having been invalid was affirmatively, overtly, and purposefully solicited and induced by the Interior Department itself.

Lower federal courts have properly recognized that estoppel is a doctrine of fairness and equity,[59] and that "the doctrine of equitable estoppel binds the Government for the conduct of its agents while they are acting within the scope of their employment." *Atlantic Richfield Co.* v. *Hickel*, 432 F.2d 587, 591 (10th Cir. 1970). *Accord, C. F. Lytle Co.* v. *Clark*, 491 F.2d 834, 838 (10th Cir. 1974) ("the defense of equitable estoppel may be applied against government agencies to prevent injustices"); *United States* v. *Wharton,*

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[59] "Repudiation of representations is dirty business, no less at the hands of the government than of its citizens. Hence the claim of immunity for governmental repudiation is tolerable only to the extent that it rests on inescapable compulsions arising out of the needs of government. . . . The claim of the government to an immunity from estoppel is in fact a claim to exemption from the requirements of morals and justice. As such, it needs to be jealously scrutinized at every stop. Confidence in the fairness of the government cements our social institutions. No pinchpenny enrichment of the government can compensate for an impairment of that confidence, for the affront to morals and justice involved in the repudiation of a governmental representation." Raoul Berger, *Estoppel Against the Government*, 21 U. Chi. L. Rev. 680, 707 (1954).

514 F.2d 406, 410 (9th Cir. 1975); *Fox* v. *Morton*, 505 F.2d 254, 256 (9th Cir. 1974); *United States* v. *Lazy FC Ranch*, 481 F.2d 985 (9th Cir. 1973); *United States* v. *Georgia-Pacific Co.*, 421 F.2d 92 (9th Cir. 1970); *see Comment, Emergence of an Equitable Doctrine of Estoppel Against the Government—The Oil Shale Cases*, 46 U. Colo. L. Rev. 433, 440-451 (1975).

The petitioner argues that, in any event, an estoppel will not lie unless the actions of Government officers are "wrongful" or "blameworthy" or constitute "misconduct" (Brief, p. 54). To be sure, such conduct is often present in a situation which calls for an estoppel. The facts of this case, however, go beyond unauthorized and wrongful conduct by a government employee. This case involves the attempted repudiation of the acts of the highest officers of a department of government acting within the scope of their delegated powers.[60] It was the responsibility of the Secretary of the Interior in 1916-1920 to apply the mining laws to the unique situation of oil shale. A standard or rule of discovery was called for and the Secretary, in the exercise of his delegated authority, formulated the standard—definitively expressed in the 1920 *Instructions*. Every successor to the office of the Secretary of the Interior from 1920 to 1961 has adhered to that standard. The Secretary's argument for "wrongful" conduct goes too far. It leads to the conclusion that no authorized act can be the basis of an estoppel.

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[60] The petitioner does not explain how, if, indeed, oil shale was never valuable, it was not wrongful, affirmative misconduct for Secretaries of the Interior from 1916 to 1960 and their subordinates to induce private and congressional action by the "misrepresentation" that oil shale was valuable. Under cases such as *United States* v. *Wharton*, 514 F.2d 406, 412 (9th Cir. 1975), an estoppel would lie. Here as there the Government advice that oil shale lands could be taken to patent was erroneous (if the petitioner's present contentions are accepted) and the status of the land as open to mineral entry for oil shale claims was misrepresented.

The present Secretary's reliance upon *United States* v. *Ruby Co.*, 588 F.2d 697 (9th Cir. 1978), *cert. denied*, __ U.S. __, 99 S. Ct. 2838 (1979), and *Santiago* v. *Immigration & Nat. Serv.*, 526 F.2d 488 (9th Cir. 1975), *cert. denied*, 425 U.S. 97 (1976), is also misplaced. Those cases happen to involve wrongful conduct by lower echelon officials, but they do not say that authorized conduct by the head of a department cannot be the basis for an estoppel. "However the case may be with respect to 'unauthorized' conduct, estoppel clearly may be based upon 'authorized' conduct. The sole tenable argument for the immunity [of government from estoppel] derives from the separation of powers—a consideration which has no play where administrative action is *authorized* by Congress. In such case the government should be and is estopped." Berger, *Estoppel Against the Government*, 21 U. Chi. L. Rev. 680, 687-688 (1954). The recognition accorded the value of oil shale by the Secretary of the Interior in 1920 was at least a permissible and "authorized" application of the mining laws to the Green River Formation oil shale deposits, as evidenced by contemporary congressional agreement with it. It is thus inaccurate to insist, as the petitioner does (*e.g.*, Brief, p. 47), upon the relevance of the proposition that equitable estoppel does not bar correction of an error of law, and therefore does not prevent an administrative agency from substituting a proper regulation in place of a regulation at war with the governing statute. Rather, what is involved here, as the petitioner more or less openly concedes (Brief, p. 57 n. 29), is simply a change of policy, dressed out necessitously as a correction of prior legal error, and, moreover, a change of policy which can only be effective if applied retroactively to recharacterize the legal status of pre-existing claims.

As to the "public interest," it will not be damaged by the patenting of the six claims at issue to any greater extent now than it would have been had these claims come before the Department of the Interior in 1920 or in any of

the years prior to 1961.[61] By contrast, the Department's present "conduct would work a serious injustice if . . . [the Schuyler family, Shell and other owners of unpatented oil shale claims] were divested of the . . . [property] in which they have invested . . ." *United States* v. *Wharton,* 514 F.2d 406, 412 (9th Cir. 1975).

In 1916 the Department had the opportunity to achieve what it now seeks to accomplish. It could have precluded the patenting of oil shale claims by withdrawing the Green River Formation lands from location under the mining laws. But the Department opted not to do so in order to induce the very efforts and expenditures, in locating or patenting claims and work to develop commercial technology, on which the claim owners rely. There is nothing contrary to the public interest in continuing to respect the decision the Department made in 1916 and implemented consistently for 44 years thereafter.

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[61] In their 1918 presentation to the Department and the House Committee on Public Lands the oil shale claim owners had estimated that about 10-15% of the oil shale lands in Colorado would go to patent, and the remaining 85-90% would be developed under leasing once commercial success was demonstrated on the mining claims. App. 73-74. While further claims were located between 1918 and 1920, many claims were subsequently declared invalid by the Department (App. 69, 101, 103-104), and the 10-15% estimate may prove to have been too high. To date some 350,000 acres have been patented (Ex. C-190), which is about 4% of the total oil shale acreage of 8¼ million acres. App. 83. The petitioner's expressed fear (Brief, p. 59 n. 32) that 5 million acres may go to patent if the court of appeals is affirmed is wholly unsupported and is in stark contrast to the fact that in the 40 years between 1920 and 1960 patents issued for only about 7% of that acreage.

CONCLUSION

For the foregoing reasons, the judgment of the Court of Appeals should be affirmed.

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No. 78-1815

In the Supreme Court of the United States

OCTOBER TERM, 1979

CECIL D. ANDRUS, SECRETARY OF THE INTERIOR,
PETITIONER

v.

SHELL OIL COMPANY AND D.A. SHALE, INC.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE TENTH CIRCUIT

REPLY BRIEF FOR THE PETITIONER

WADE H. MCCREE, JR.
Solicitor General
Department of Justice
Washington, D.C. 20530

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We confine ourselves here to a single point argued at much length by respondents (Br. 25-39): that, in 1920, Congress "expressed its intent" to treat at least some oil shale deposits as "valuable" minerals, subject to location and patent under the old mineral laws—else it would have been pointless to exempt from the new leasing system "valid claims" in respect of oil shale lands.

1. The short answer is that Section 37 of the Mineral Leasing Act of 1920 (Pet. Br. 3-4) does *not* speak to the question whether any oil shale lands were deemed subject to location and patent under the mining laws. To be sure, oil shale is included with coal, phosphate, sodium, oil, and gas, as a mineral withdrawn from future disposition except by leasing. But the decision to reserve oil shale deposits for leasing might well be made even

though lands containing such deposits were presently subject to entry under the homestead laws, rather than location under the mineral laws. Contrary to respondents' assertion, "lands valuable for such minerals" in Section 37 of the 1920 Act is not necessarily equivalent to "valuable mineral deposits" in the old mining law. See, *e.g.*, *State of California* v. *E. O. Rodeffer*, 75 I.D. 176, 179-181 (1968). Cf. *Andrus* v. *Charlestone Stone Products Co.*, 436 U.S. 604, 610-614 (1978).

The savings clause of Section 37 of course exempted any and all then "valid claims" involving the minerals subject to the Mineral Leasing Act. In the absence of a listing in the clause itself, however, the general words we find there cannot be taken to imply that some of these "valid claims" would involve oil shale—much less that any such claim to oil shale lands would exist under the mining law, rather than the general land laws.[1] Plainly, the clause would read exactly as it does if it had been

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[1]Although respondents do not mention the provision, we note the possible relevance of Section 21 of the Mineral Leasing Act of 1920 (now 30 U.S.C. 241). The "relinquishment" clause of that section may be taken to imply that there were, in the view of the 1920 Congress, outstanding oil shale claims "under existing laws on January 1, 1919." But, again, we are not told whether the "laws" referred to are the mining laws of 1870 and 1872. We do not read this Court's decision in *Work* v. *Braffet*, 276 U.S. 560, 566 (1928), as construing the term "valid claim" in the Mineral Leasing Act as confined to claims under the mining laws. The thrust of that decision is simply that, to be preserved, the claim must be "substantial"—such "as would on compliance with the provisions of the former law ripen into ownership" (*ibid.*). But, provided the test of "substantiality" is met, the claim is equally exempted if it exists under the homestead or other non-mineral laws. See, *e.g.*, *John B. Forrester and Robert M. Magraw*, 48 I.D. 188, 190 (1921).

known to all that valid claims under the existing mineral laws could cover the other listed minerals, but not oil shale.

2. Nor does the legislative history of the Mineral Leasing Act demonstrate that Congress entertained a concluded view on the status of oil shale claims under the old law. It may be that some individual members believed there were outstanding valid claims. But all that can fairly be deduced is that Congress, as a body, agreed to leave such claims where they found them, exempt from the new prohibition on patents only if then "valid" and—in the words of Section 37—"thereafter maintained in compliance with the laws under which initiated, which claims may be perfected under such laws, including discovery." As Senator Thomas of Colorado later explained—in language quoted by respondents (Br. 37) "it was our intention that [outstanding oil shale claims] should occupy the same position in the mining law of 1872 after the leasing act was passed that they would have occupied if no leasing act had ever been passed."

In sum, the 1920 Act cannot be invoked to validate claims that did not qualify under the old law. Whether or not shale deposits were subject to location must be decided by construing the Acts of 1870 and 1872 (Pet. Br. 2-3). Of course, the views of a later generation of legislators must be taken into account. But ambiguous expressions by one or two Members of Congress half a century later cannot override the settled rule of the old mining law that "discovery" of a "valuable mineral" requires a showing that the mineral could be extracted and profitably marketed under current economic and

technological conditions. Congress might have changed that standard when it enacted the Mineral Leasing Act of 1920. It did not.

Respectfully submitted.

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